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Building E-Government at the Grassroots under Vietnam's Two-Tier Local Government Model: Current Status and Solutions from Lai Thanh Commune, Ninh Binh Province

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Abstract
Since 1 July 2025, Vietnam has operated a two-tier local government model in which the commune has become the main point of contact between the state and citizens for most administrative procedures. This shift places e-government at commune level at the centre of public administration reform. This paper examines the current state of e-government at the People's Committee of Lai Thanh commune, Ninh Binh province, a rural commune formed from three former communes of Kim Son district. Using a qualitative single-case design based on document analysis and descriptive statistics of official administrative data, the study situates the commune within national and provincial e-government trends and assesses it across five pillars: Institutions and leadership, digital infrastructure, data and digital identity, human resources, and citizens' digital capacity. Between 1 July and 25 December 2025, the commune's Public Administrative Service Centre received 3,166 dossiers, of which 3,161 (99.8%) were submitted online; online fee payment reached 99%, all files and results were digitised, every dossier was resolved on time, and the commune's 2025 citizen and business service index reached 94.04 points. These results exceed provincial and national targets. However, the analysis also identifies persistent constraints, including a heavier workload after decentralisation, duplicated data entry, unstable interconnection with national platforms, payment reconciliation problems and uneven digital skills among residents. The paper proposes six groups of solutions and argues that sustaining high online rates now depends less on front-office digitisation than on clean shared data, reliable back-office integration and continuous support for citizens who remain offline.

Keywords: e-government, Digital Government, Commune Level, Two-Tier Local Government, Online Public Services, Vietnam

1. Introduction

Digital government has become a core instrument of public sector reform across the world. The United Nations E-Government Survey 2024 shows that the share of the world population living in countries with low e-government development fell from 45% in 2022 to 22.4% in 2024, while 1.73 billion people still lack access to basic digital public services (UN DESA, 2024) [23]. Vietnam has advanced quickly within this global picture. Its E-Government Development Index (EGDI) rose from 0.6787 in 2022 to 0.7709 in 2024, moving the country fifteen places up to 71st of 193 and, for the first time, into the "very high" EGDI group (UN DESA, 2024) [23].

National rankings, however, say little about what happens where most citizens actually meet the state. In Vietnam that place is now the commune. On 1 July 2025 the country abolished the district tier and began operating a two-tier local government system consisting of provinces and communes. Many administrative procedures previously handled by districts were transferred to communes, and each commune established a Public Administrative Service Centre (PASC) to receive and return results. In Ninh Binh province, which was itself enlarged by merging with Ha Nam and Nam Dinh, 129 commune-level units now operate PASCs, and about 85% of all administrative dossiers in the province are handled at commune level (Ninh Binh Provincial People's Committee, 2026a) [16].

This change makes the commune the decisive test of whether e-government delivers on its promise. A commune government that receives more procedures but lacks digital tools, data and trained staff risks longer queues and more errors. A commune

that combines new responsibilities with well-designed digital workflows can become faster and more transparent than the district offices it replaced.

Lai Thanh commune in Ninh Binh province offers a useful case. It was formed on 1 July 2025 by merging the former communes of Yen Loc, Tan Thanh and Lai Thanh of Kim Son district (Standing Committee of the National Assembly, 2025a) [20]. It is a rural coastal-plain commune, not an urban ward with naturally high digital uptake. Yet within six months of operation it reported online submission and digitisation rates close to 100% and a service index score of 94.04 points, rated excellent on the National Public Service Portal (Nhan Dan, 2026) [15].

The paper addresses three questions. First, what is the current state of e-government at Lai Thanh commune People's Committee under the new two-tier model? Second, what factors explain its achievements, and which constraints remain? Third, which solutions can consolidate and extend e-government at this commune and at similar rural communes? By answering these questions, the paper contributes empirical evidence on grassroots e-government in a transition economy during a period of major territorial reorganisation, a context that remains under-studied in the international literature.

2. Literature review and analytical framework

2.1 E-government and digital transformation in the public sector

E-government is commonly defined as the use of information and communication technologies, particularly the internet, to deliver government information and services and to improve the internal operation of public administration (Heeks, 2006) [9]. Early stage models described a progression from cataloguing information online, to transactions, and then to vertical and horizontal integration of government systems (Layne and Lee, 2001) [11]. West (2004) [25] showed that most governments had moved quickly through the first two stages but struggled with integration, which demands changes in organisation and data rather than only new websites.

Later research shifted from technology to transformation. Dunleavy *et al*. (2006) [6] described a move towards "digital-era governance", in which reintegration of fragmented agencies and needs-based holism replace the disaggregation associated with New Public Management. Janowski (2015) [10] proposed an evolutionary model running from digitisation through transformation and engagement to contextualisation, in which digital government becomes adapted to the needs of specific places and communities. Mergel *et al*. (2019) [13] found that public managers understand digital transformation as a holistic effort to revise core processes and services, beyond the traditional digitisation of existing paper forms.

Public value is a recurring theme. Bannister and Connolly (2014) [1] argued that ICT can both support and threaten public values such as equity, transparency and accountability. Twizeyimana and Andersson (2019) [22], in a review of the e-government literature, grouped public value into improved public services, improved administrative efficiency and open government capabilities. These categories are useful for assessing a commune, because they combine citizen-facing outcomes with internal efficiency.

2.2 Local and grassroots e-government

Most studies examine e-government at national or city level. Research on the lowest tiers of administration emphasises different conditions. Local governments often face limited budgets, shortages of technical staff and populations with lower digital literacy (Lindgren *et al*., 2019) [12]. Adoption by citizens depends on trust, perceived usefulness and ease of use (Carter and Bélanger, 2005) [3], and digital divides in access, skills and outcomes can exclude older and poorer residents (van Dijk, 2020) [24]. Grassroots e-government is therefore not simply a scaled-down version of national digital government. It relies heavily on intermediaries, such as one-stop shop officials, community volunteers and postal workers, who help citizens complete online transactions.

2.3 Policy context in Vietnam

Vietnam's legal foundation for e-government includes the Law on Electronic Transactions No. 20/2023/QH15, Decree No. 61/2018/ND-CP on the one-stop shop mechanism, and Decree No. 45/2020/ND-CP on administrative procedures in the electronic environment. Project 06, approved by Decision No. 06/QD-TTg of 6 January 2022, built the population database and the VNeID electronic identification application, which allow procedures to reuse citizen data instead of requiring paper copies. Resolution No. 57-NQ/TW of 22 December 2024 of the Politburo elevated science, technology, innovation and national digital transformation to a strategic breakthrough. From 27 June 2025 the National Public Service Portal became the single digital window for online public services nationwide, and provincial portal interfaces were closed from 1 July 2025.

At provincial level, Ninh Binh's 2026 digital transformation plan sets targets of at least 90% of administrative dossiers processed online, 100% of eligible procedures provided as full-process online services, and at least 80% of administrative transactions conducted "contact-free" (Ninh Binh Provincial People's Committee, 2026b) [17].

2.4 Analytical framework

Drawing on the literature above and the UN digital government model framework, which highlights leadership, data, digital identity, e-participation, digital culture and infrastructure (UN DESA, 2024) [23], this study assesses commune e-government through five pillars (Fig 3). The pillars are (1) institutions and leadership, (2) digital infrastructure and equipment, (3) data and digital identity, (4) human resources of the commune administration, and (5) citizens' digital capacity. Together they produce outputs such as online dossiers, electronic payment and digitised records, which in turn generate outcomes in speed, transparency, satisfaction and lower compliance costs.

3. Research methodology

The study uses a qualitative single-case design (Yin, 2018) [26]. Lai Thanh commune was selected as an information-rich case: It is a newly merged rural commune, it operates under the new two-tier model, and it has reported high performance on public indicators, which makes it suitable for examining both enabling factors and remaining constraints.

Data were collected through document analysis (Bowen, 2009) [2] of four groups of sources: (i) national and

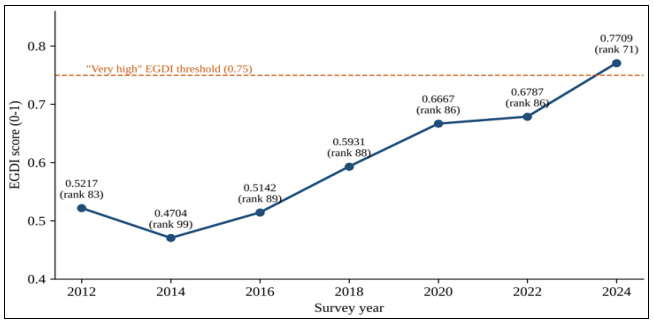
international statistics on e-government, mainly the UN E-Government Survey series; (ii) legal and policy documents of the central government and Ninh Binh province; (iii) official reports and statistics of Ninh Binh province on administrative procedures and digital transformation, including Report No. 337/BC-UBND of 2026; and (iv) published information on the operation of the Lai Thanh PASC for the period 1 July to 25 December 2025.

Quantitative data were processed with descriptive statistics: Shares, rates and comparisons against provincial and national targets. Qualitative information was coded according to the five pillars of the analytical framework. Because commune-level data in Vietnam are not yet published systematically, some indicators are only available for a six-month period. The findings should therefore be read as an assessment of the first operating phase of the two-tier model.

4. Results

4.1 National and provincial context

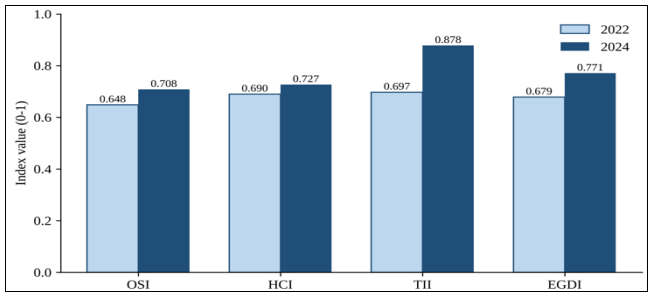
Fig 1 shows Vietnam's EGDI over seven survey rounds. After a dip in 2014, the index rose steadily and crossed the 0.75 threshold for the "very high" group in 2024.



Source: UN E-Government Surveys, compiled by the authors

Fig 1: Vietnam's E-Government Development Index and rank, 2012-2024

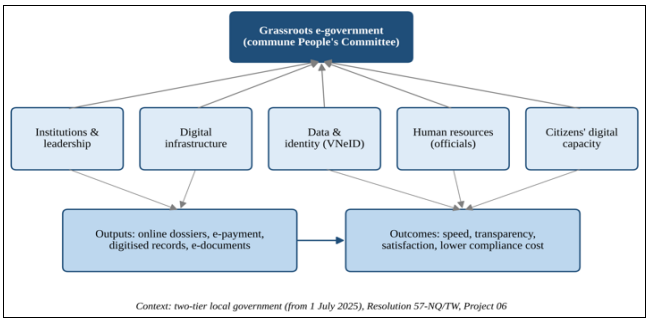
The components of the index explain where progress came from. In 2024 the Telecommunication Infrastructure Index (TII) reached 0.8780 and ranked 67th, the Human Capital Index (HCI) reached 0.7267 and ranked 79th, and the Online Service Index (OSI) reached 0.7081 and ranked 75th. Compared with 2022, TII grew by 25.9%, OSI by 9.2% and HCI by 5.3% (Fig 2). Infrastructure is therefore Vietnam's relative strength, while online service provision and human capital lag behind. This pattern matters for communes: Networks and devices are increasingly available, but the quality of services and the skills of users and officials remain the binding constraints.



Source: UN DESA, 2024

Fig 2: Components of Vietnam's EGDI, 2022 and 2024 (2022 values derived from the growth rates reported for 2024)

In Ninh Binh, the new two-tier model went live on 1 July 2025 with PASCs at the provincial level and in all 129 communes and wards. By mid-2026 the province offered 2,104 online public services, of which 880 were full-process services, and 94.5% of dossiers were processed online. In the third quarter of 2026, full-process online dossiers reached 98.2%, partial online dossiers 91.5% and online payment on the National Portal 92.1%. At the same time the province reported serious difficulties: Overload and errors of the National Public Service Portal, unstable data interconnection, and data inconsistencies that led the province to suspend the ranking of agencies' procedure handling from 1 March 2026 (Ninh Binh Provincial People's Committee, 2026a) [16].



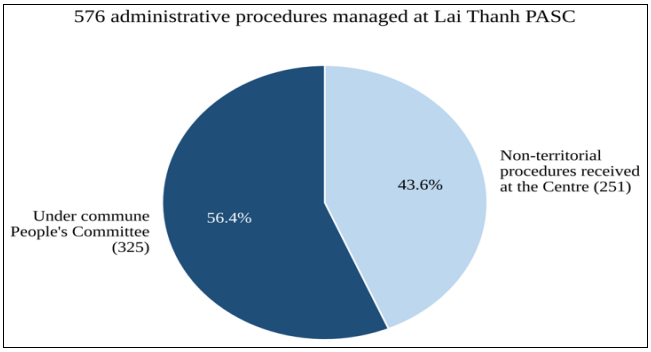
Source: Developed by the authors from Layne and Lee, 2001; Janowski, 2015; UN DESA, 2024

Fig 3: Analytical framework for assessing e-government at commune level

4.2 Overview of Lai Thanh commune

Lai Thanh commune was established under Resolution No. 1674/NQ-UBTVQH15 of 16 June 2025 by merging the entire area and population of Yen Loc, Tan Thanh and Lai Thanh communes of the former Kim Son district.

The commune PASC started operating on the same day as the new commune. It manages and monitors 576 administrative procedures. Of these, 325 fall under the authority of the commune People's Committee and 251 are procedures without territorial restriction that are received and returned at the Centre on behalf of other agencies (Fig 4). The large share of non-territorial procedures (43.6%) means that the commune now acts as a front office for the wider state system, not only for its own decisions.



Source: Nhan Dan, 2026

Fig 4: Structure of administrative procedures managed at Lai Thanh commune PASC

4.3 Results of e-government implementation

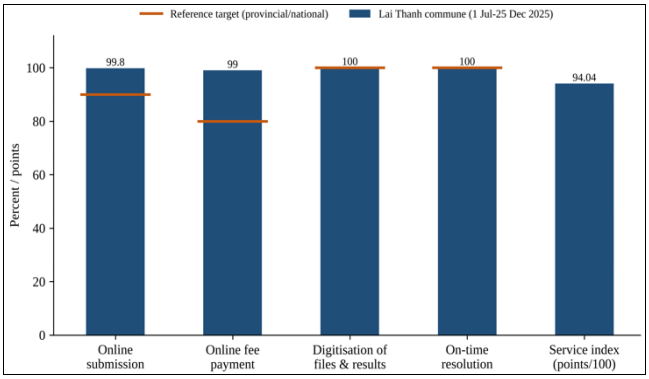
Table 1 summarises the main output indicators for the first six months of operation.

Table 1: Key e-government indicators at Lai Thanh commune, 1 July to 25 December 2025

Indicator	Lai Thanh commune	Reference target	Assessment
Dossiers received	3,166	-	-
Dossiers submitted online	3,161 (99.8%)	≥ 90% processed online (Ninh Binh, 2026b) [17]	Exceeded
Online payment of fees and charges	99%	≥ 80% contact-free transactions (closest available proxy; Ninh Binh, 2026b) [17]	Exceeded
Files and results digitised and stored electronically	100%	100%	Achieved
Dossiers resolved on time or early	100%	100%	Achieved
Citizen and business service index, 2025	94.04 points (excellent)	-	High
Procedures managed	576 (325 commune; 251 non-territorial)	-	-

Source: Compiled by the authors from Nhan Dan (2026) [15] and Ninh Binh Provincial People's Committee (2026b) [17]. The online share is calculated from the reported numbers of dossiers

Fig 5 compares these results with the reference targets. On every available indicator the commune met or exceeded the targets set by the province for 2026, despite being only six months into operation.



Source: Compiled by the authors

Fig 5: Performance of Lai Thanh commune against reference targets

4.4 Assessment by pillar

Institutions and leadership: The commune adopted a "six clear" principle for staff assignment: Clear people, clear tasks, clear responsibility, clear authority, clear time and clear results. This principle links every procedure to a named official and a deadline, which is a precondition for using electronic workflow and deadline tracking. The commune leadership also defined people as the decisive factor and technology as the enabling force, and has reviewed and cut procedures judged no longer suitable (Nhan Dan, 2026) [15].

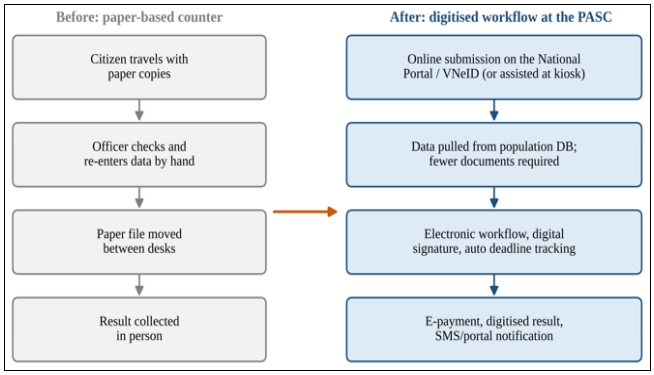
Digital infrastructure and equipment: The PASC is equipped with an automatic queue-number system, information lookup kiosks, digital signatures, electronic file storage, integrated non-cash payment, and QR codes listing procedures under commune authority. These tools cover the full front-office cycle, from arrival to result. At provincial level, however, the report to the Ministry of Justice notes that scanning equipment and storage infrastructure in some communes do not yet match the volume of records (Ninh Binh Provincial People's Committee, 2026a) [16].

Data and digital identity: Integration with VNeID allows the Centre to retrieve citizen data and reduce the documents residents must provide. This is the most important change in the back office, because it shifts the burden of proof from the citizen to the state. The limits of this pillar are visible at provincial level: names, dates of birth, addresses, identification numbers and asset information are not consistent across systems, so automatic matching often fails, and the National Portal still contains duplicate procedure codes.

Human resources: Before digitisation, officials often had to re-enter the same data several times, and manual handling caused waiting, missing information and declaration errors (Nhan Dan, 2026) [15]. Digital workflows reduce this burden but require new skills in guiding citizens, checking electronic dossiers and using several software systems at once. Province-wide, staff shortages and weak coordination remain among the causes of late handling in some fields.

Citizens' digital capacity: The near-complete online submission rate does not mean that every resident submits from home. Province-wide, Youth Union volunteers have been stationed at commune PASCs to help residents submit dossiers online and use VNeID (Dai bieu Nhan dan, 2025b) [5], so part of the online submissions recorded at commune level is likely to be assisted rather than made by residents themselves; published data do not show how large this share is. This "assisted digital" model is effective in the short term, but it means the commune still absorbs much of the effort that e-government should move to citizens. Ninh Binh has responded with the "Bình dân học vụ số" (digital literacy for all) movement, launched in the province by the police and carried out by commune police, youth volunteers and community digital technology teams, who guide residents in using VNeID and online services (Dai bieu Nhan dan, 2025a, 2025b) [4, 5].

Fig 6 summarises how the service process at the Centre has changed.



Source: Developed by the authors

Fig 6: Service process at Lai Thanh commune before and after digitisation

4.5 Remaining constraints

Table 2 brings together the main constraints identified from commune and provincial sources.

Table 2: Main constraints on e-government at commune level

Area	Constraint	Evidence
Workload	Many procedures transferred from district to commune after 1 July 2025	Nhan Dan (2026) [15]; 85% of provincial dossiers handled at commune level
Data	Inconsistent personal and asset data across systems; duplicate procedure codes	Report 337/BC-UBND (2026)
Platform stability	Overload, interface errors and unstable interconnection of the National Portal	Thanh Tra (2026) [21]
Payment	Payment button missing; successful payments recorded as failed; bank notices without dossier code; delays of up to a month	Report 337/BC-UBND (2026)
Equipment	Scanners and storage below the volume of records in some communes	Report 337/BC-UBND (2026)
Citizens	Limited access to technology among part of the population	Report 337/BC-UBND (2026)

Source: Compiled by the author

Two observations stand out. First, most constraints sit outside the commune's direct control. Data quality, portal stability and payment reconciliation depend on national and provincial systems. Second, these back-office problems are hidden by high front-office indicators. A dossier can be "submitted online" and still require manual checks of bank notices or manual correction of mismatched citizen data, which consumes the time saved by digitisation.

5. Discussion

The Lai Thanh case supports the view that grassroots e-government in Vietnam has moved beyond the information and transaction stages of Layne and Lee (2001) [11]. Online submission, digital payment and electronic storage are now routine. The remaining challenges concern integration, which West (2004) [25] and Dunleavy *et al.* (2006) [6] identified as the hardest step, because it requires shared data and coordinated organisations rather than additional front-end tools.

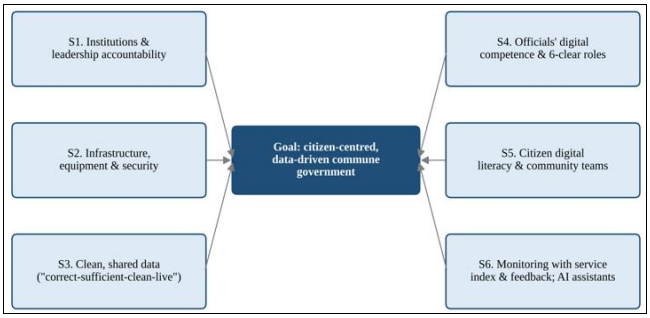
Three factors appear to explain the commune's results. The first is leadership commitment translated into clear accountability through the "six clear" principle. The second is the national investment in digital identity and population data under Project 06, which allows a small commune to reuse data instead of collecting it again. The third is the assisted-digital model, in which officials guide residents through online submission at the Centre. This last factor is a strength and a risk at once. It raises measured online rates quickly, but as van Dijk (2020) [24] warns, it may conceal persistent gaps in skills and use among older and less educated residents.

The findings also qualify the interpretation of performance indicators. Very high online rates, observed in Lai Thanh and across Ninh Binh in 2026, are likely to reflect, in part, administrative targets and assisted submission. They measure the channel used, not the quality of the citizen's experience or the internal efficiency of processing. The suspension of provincial rankings in March 2026 because of inconsistent data illustrates that indicators are only as reliable as the data behind them. Future evaluation should therefore add measures such as the share of dossiers completed by citizens themselves, average processing time, number of document requests avoided through data reuse, and the frequency of payment reconciliation errors.

For the public value perspective (Twizeyimana and Andersson, 2019) [22], Lai Thanh shows clear gains in service quality and transparency. Gains in administrative efficiency are less certain until back-office integration is fixed. Gains in open government and participation, such as using feedback channels and the service index to improve services, remain at an early stage.

6. Solutions

Based on the results, the paper proposes six groups of solutions (Fig 7).



Source: Proposed by the authors

Fig 7: Proposed solution framework for e-government at Lai Thanh commune

S1. Institutions and leadership accountability: The commune should issue an annual e-government and digital transformation plan aligned with the provincial plan and Resolution 57-NQ/TW, with indicators assigned to named officials under the "six clear" principle. Indicators should include processing time and self-submission rates, not only online submission rates. The head of the commune People's Committee should review the indicators monthly with the PASC.

S2. Infrastructure, equipment and security: Priority investment should go to high-capacity scanners, storage and backup for digitised records, stable broadband and information security in line with the assigned security level. Equipment should be planned from the expected volume of records, since the commune now carries the workload of former district offices.

S3. Clean and shared data: The commune should work with the provincial PASC and the police to clean local data under the principle "correct, sufficient, clean, live, consistent and shared". Practical steps include reconciling civil status, residence and land records of the three former communes, standardising addresses after the merger, and reporting duplicate procedure codes to the provincial focal point. A simple log of mismatches by type would help the province fix systemic errors.

S4. Officials' digital competence: Training should move from basic software use to skills in guiding citizens, verifying electronic dossiers, handling payment exceptions and protecting personal data. Cross-training between territorial and non-territorial procedures would reduce bottlenecks when staff are absent.

S5. Citizen digital literacy and community teams: The commune should consolidate community digital technology teams in each village, involving youth union members, police and post office staff, and run regular sessions under

the "Bình dân học vụ số" movement. Support should target groups with low uptake, such as older residents and farmers, and focus on a small number of high-frequency procedures, for example birth registration, residence registration and certification of copies.

S6. Monitoring, feedback and smart assistance: The service index published on the National Portal should be used as a management tool, with monthly analysis of complaints and delays. In the medium term the commune can pilot AI and digital assistants, as it already plans, to guide users, detect common declaration errors and send deadline reminders, provided that provincial platforms support this and personal data are protected.

7. Conclusion

This paper examined e-government at Lai Thanh commune People's Committee during the first phase of Vietnam's two-tier local government model. The commune achieved near-universal online submission, digital payment and digitisation, on-time resolution of all dossiers, and an excellent service index within six months. These results show that a rural commune can quickly adopt e-government when leadership accountability, national digital identity infrastructure and assisted-digital support come together.

The analysis also shows that the next stage is harder. The main constraints now lie in data quality, integration with national platforms, payment reconciliation, equipment capacity and the digital skills of residents. Sustaining progress requires shifting attention from front-office digitisation to back-office integration and to citizens' independent use of online services.

The study has limitations. It relies on secondary data for a six-month period and on a single case, and it does not include a citizen survey. Future research could combine administrative data from several communes with surveys of residents and officials to compare performance and to test which factors most strongly influence citizens' independent use of online public services.

8. Acknowledgements

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