

Strengthening Village Information Governance: An Integrated Community Engagement Programme

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ABSTRACT

Indonesian villages now administer substantial public funds and operate their own enterprises, yet the information on which accountability depends is often missing, fragmented or inaccessible. Community engagement responses typically address a single domain and report what was delivered rather than what changed. This programme took the opposite approach in Allakuang, a village in Sidenreng Rappang Regency, South Sulawesi, between December 2025 and February 2026. Its purpose was to test whether several linked interventions, delivered to one village within a single cycle, could shift the village from an information-poor to an information-legible condition. A participatory action design moved from a household-level needs assessment across five hamlets to five interventions: legal literacy on village fund governance; financial accounting training and mentoring for the village-owned enterprise; household organic waste composting; an integrated village profile published on a public website; and digital tourism information with printed QR access points. Attainment was evaluated as verified change in information status rather than as test scores, with physical artefacts and photographic records as evidence. The clearest result came from the village-owned enterprise, whose accounts had not been compiled for a year and were reconstructed in full for 2024 and 2025, after which officers prepared a monthly report without assistance. Legal literacy reached 32 participants and composting 20. The programme shows that bounded partners with defined duties change faster than diffuse audiences, and that information artefacts outlast the engagement that produced them.

Keywords: village information governance; accountability; village-owned enterprise; rural digitalisation; participatory action research

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1. Introduction

Law No. 6 of 2014 on Villages (the Village Law) transferred to Indonesia's villages a scale of fiscal and administrative authority without precedent in the country's post-independence history. Villages now plan their own budgets, run their own enterprises and account for transfers that reach them directly from the national treasury. The reform was deliberate in its ambition: it treated the village not as the last link in an administrative chain but as a unit of self-government with its own deliberative institutions (Antlöv et al., 2016). A decade on, the evidence on what this authority has produced is mixed. Transfers have been large and broadly distributed, but the allocation formula and the absorptive capacity of recipient villages have both drawn criticism, and the administrative burden placed on village officials has proved heavier than the reform anticipated (Lewis, 2015).

Underneath the fiscal question lies an informational one that receives less attention. Accountability is not a property that an institution possesses; it is a relationship in which an actor is obliged to explain conduct to a forum that can pose questions and pass judgement (Bovens, 2007). That relationship cannot operate unless the forum has something to examine. Where a village enterprise keeps no ledgers, there is nothing for a village assembly to interrogate. Where residents do not know that budget information is theirs by right, the forum does not convene at all. Transparency, in turn, is not self-executing: disclosure raises perceived trustworthiness only when the information released is intelligible to those receiving it, and poorly framed disclosure can leave perceptions unchanged or worse (Grimmelikhuijsen & Meijer, 2014). The binding constraint in many villages is therefore neither the absence of rules nor the absence of money, but the absence of legible information and of the capability to produce and read it.

This constraint repeats across domains that are rarely examined together. Village information systems have been introduced widely in Indonesia, yet their adoption depends less on the software than on the competence, incentives and organisational support surrounding the officials expected to maintain them (Sihotang et al., 2023). Village-owned enterprises, created to convert local potential into village revenue, frequently underperform for reasons that are managerial rather than commercial: officers lack accounting and entrepreneurial skills, and the enterprise consequently cannot demonstrate what it has earned or lost (Kase et al., 2024). Rural tourism assets remain invisible to the visitors who would pay for them because information about those assets never enters the channels where travel decisions are now made (Gretzel et al., 2015). Even household waste, apparently a purely technical matter, turns on whether practical knowledge circulates: composting is low-cost and well-established, and its limits in practice are organisational and behavioural rather than technical (Ayilara et al., 2020).

Read together, these are variants of one problem. The literature on digital inequality has already made the analogous move, showing that the first-level divide has shifted from physical access to the quality of access and the skills that make access productive (van Deursen & van Dijk, 2019); the field of information and communication technologies for development has likewise turned from artefacts towards the social arrangements that determine whether artefacts are used at all (Walsham, 2017). Applied to village governance, the implication is that an intervention which installs a system, delivers a lecture or hands over a device addresses the visible layer of a problem whose weight sits elsewhere.

If the deficit is shared across domains, a response confined to one domain is unlikely to shift it. The argument for working on several fronts at once rests on co-production: public outcomes are generated jointly by officials and citizens, and the synergy between them depends on complementary capabilities being present on both sides simultaneously (Ostrom, 1996). Community development scholarship reaches a parallel conclusion from a different direction, holding that the substance of development is the agency a community exercises rather than the goods it receives (Bhattacharyya, 2004), and that the knowledge held by the community must set the agenda rather than answer to one set elsewhere (Chambers, 2013; Freire, 2000). Participatory action research operationalises this commitment by making those affected co-investigators of their own situation (Baum et al., 2006; Israel et al., 1998).

Indonesian community engagement reporting has not yet caught up with this framing. Published accounts are overwhelmingly single-domain and overwhelmingly output-centred: they document a training event, a product or a system handed over, and they close before establishing whether anything changed for the partner (Silfiani et al., 2026). Few report a documented baseline; fewer

still return to the field. The result is a literature rich in activity and thin in evidence, from which it is difficult to learn which designs work and under what conditions.

This article reports a programme designed against that pattern. It was carried out between December 2025 and February 2026 in Allakuang, a village in Maritengngae District, Sidenreng Rappang Regency, South Sulawesi, whose assets include stone crafting, agriculture, livestock and several local tourism sites, and whose constraints include the absence of a managed waste site and the absence of any integrated record of what the village holds. Five interventions were delivered to the same village within a single engagement cycle by one interdisciplinary team. The objective was twofold: to raise the village's capability to produce, hold and publish the information on which its own governance depends; and to examine whether interventions addressing a shared deficit from different directions reinforce one another. A subsidiary methodological aim was to report attainment as verified change in status rather than as participant enthusiasm, so that the account can be assessed by a reader who was not present.

2. Method of Implementation

2.1. Setting and partners

Allakuang comprises five hamlets and sits in Maritengngae District, Sidenreng Rappang Regency, South Sulawesi. Partners were the village government and the village deliberative body; the management of the village-owned enterprise, BUMDesa Nene Mallomo; hamlet heads and community leaders; farming households and homemakers; and the district facilitator responsible for supporting village enterprises. The implementing team was an interdisciplinary group of students from Universitas Hasanuddin drawn from law, accounting, engineering and social sciences, working under academic supervision. Fieldwork ran from 23 December 2025 to 10 February 2026 within the university's thematic community service programme (Kuliah Kerja Nyata, KKN) on regional innovation, and the team was resident in the village for the whole period.

2.2. Design

The programme followed a participatory action design in four sequential phases: household-level situational assessment, collective interpretation of the assessment into an intervention portfolio, delivery of the interventions, and handover with sustainability arrangements. Consistent with participatory action research, partners were treated as the source of the problem definition rather than as recipients of a predetermined curriculum (Baum et al., 2006; Israel et al., 1998); the assessment therefore preceded, and determined, the content of every intervention that followed.

2.3. Situational assessment

The assessment combined direct observation with household and institutional visits across all five hamlets. The team visited each hamlet head in turn, surveyed micro-enterprises operating in each hamlet, examined the village's existing information products, and held working meetings with village officials and with the district enterprise facilitator. Assessment records were kept as daily field notes and supported by photographic documentation. The findings were then interpreted collectively by the team, and the five deficits set out in Table 1 were agreed as the basis for the intervention portfolio.

Table 1. Deficits identified during the situational assessment and the intervention agreed for each

Domain	Condition found at assessment	Intervention agreed
Village fund governance	Residents and some community leaders were unaware of their entitlement to information on village budget planning and accountability, and no forum existed in which such information was routinely explained.	Legal literacy session on transparency and accountability in village fund management, with a printed pocket guide.
Village-owned enterprise	Financial records had not been compiled into a complete set of statements for the preceding year; officers depended on the district facilitator to produce reports on their behalf.	Accounting training combined with hands-on mentoring in reconstructing and maintaining the enterprise ledgers.
Village information and potential	Village data and local potential were presented only as a brief infographic; no integrated, publicly accessible record of the village existed.	Compilation of an integrated village profile published on a public website.
Tourism information	Information about local tourism assets circulated by word of mouth; visitors had no means of retrieving it independently at the sites themselves.	Development of a tourism information website linked to printed QR codes placed at strategic points.
Household organic waste	The village had no managed temporary waste site; household organic waste was discarded in yards, burned or left to accumulate without treatment.	Demonstration of household composting from locally available materials, with a practical guide.

Source: Situational assessment field records, Allakuang village, 2026.

2.4. The intervention portfolio

The five interventions were not conceived as independent projects but as entry points into a common deficit, and were sequenced so that the assessment and profile work fed the material used in the tourism and literacy components. Figure 1 sets out the logic connecting them; Table 2 summarises them as delivered.

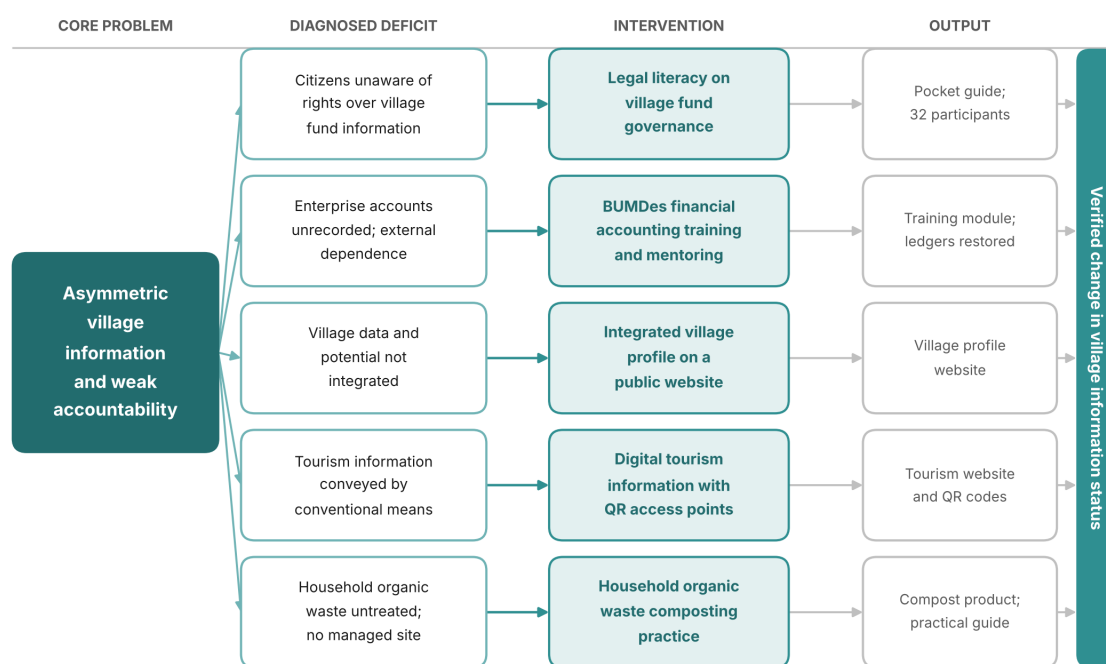


Figure 1. The integrated intervention framework

Source: Authors' construction, 2026.

Table 2. The five interventions as delivered

Intervention	Approach	Primary partner	n	Output
Legal literacy on village fund governance	Presentation, facilitated discussion and open question session	Village government, deliberative body, community leaders	32	Pocket guide on transparency and accountability in village fund management
BUMDesa financial accounting	Training combined with hands-on mentoring during ledger reconstruction	Enterprise management; district facilitator	—	Training module; reconstructed financial statements
Household organic waste composting	Briefing followed by participatory demonstration using local materials	Farming households and homemakers, hamlet representatives	20	Compost in fermentation; practical composting guide
Integrated village profile	Data compilation, verification and publication	Village government	—	Village profile published on a public website
Digital tourism information	Field data collection, website development, QR generation and handover briefing	Village government; tourism managers; village youth	—	Tourism website; printed QR access points

Source: Programme records. Notes: n = number of participants, reported only where an attendance record was kept; indicates that no attendance record was kept, which is a documented limitation of the programme, 2026.

2.5. Evaluation approach

No standardised pre-test or post-test instrument was administered in any of the five interventions. This is a limitation of the programme as executed, and it is stated here rather than disguised, because it determines what the results in Section 3 can and cannot support. Evaluation instead rested on three sources: structured observation during delivery; interviews with enterprise officers and village officials; and inspection of the artefacts produced, including a joint review of the reconstructed financial statements with the district facilitator, who assessed completeness of documentation, arithmetical accuracy and conformity with village accounting practice.

Attainment was consequently defined as verified change in information status rather than as a change in measured scores. For each domain the team recorded the condition at assessment, the condition at handover, and the artefact or observation by which the latter can be checked by a third party. This design yields binary and documentary evidence — a ledger that did not exist and now does, a website that can be opened, a QR code that resolves — which is weaker than a measured effect but stronger than reported enthusiasm, and which remains verifiable after the team has left. Photographic documentation of each activity was retained as a supplementary record of delivery.

2.6. Ethical considerations

The programme was conducted under institutional authorisation and was coordinated in advance with the village government and hamlet heads during the situational assessment. Participation in all sessions was voluntary, and participants were informed of the purpose of each activity before it began. Results are reported in aggregate, and no individual participant, household or enterprise transaction is identified. Financial information belonging to the village-owned enterprise is reported only at the level of whether statements existed and were complete, never as amounts.

3. Results

3.1. Assessment findings

The assessment produced one finding that shaped everything after it. Across all five hamlets, the constraint on village performance was consistently informational rather than material. The village held assets that it could not describe, operated an enterprise whose position it could not state, and administered funds whose management residents could not scrutinise. Micro-enterprises surveyed in each hamlet produced goods of evident local demand, but neither they nor the village had any record through which that activity could be seen from outside. The team found no evidence that the village lacked willingness to disclose; it found that there was, in several domains, nothing in a disclosable form. Figure 2 illustrates the site and household visits through which this reading was formed.



Figure 2. Situational assessment in Allakuang: (a) observation at a stone-crafting workshop producing carved headstones; and (b) a working visit to a hamlet head to discuss local conditions and the proposed programme

Source: Programme documentation, 2026.

3.2. Village-owned enterprise accounting

The clearest change occurred here, and it is reported first because it carries the strongest evidence. At assessment, the enterprise had not compiled a complete set of financial statements for the preceding year. Records existed as scattered notes rather than as books; officers reported that they relied on the district facilitator whenever a report was required, and three officers interviewed confirmed difficulty with the underlying accounting concepts.

A formal training session was held at the village office on 27 January 2026, but its substance lay in the mentoring around it: training was combined with mentoring during the work itself rather than delivered beforehand, so that officers reconstructed their own records under guidance. The reconstruction covered the enterprise's transactions for 2024 and 2025 through to the close of the engagement period, and produced a cash book, an operational ledger, an inventory record, a balance sheet and a profit and loss statement. Completeness of documentation, arithmetical accuracy and conformity with village accounting practice were reviewed jointly with the district facilitator. By the end of the mentoring period, officers prepared one complete monthly report without assistance, although they indicated that further guidance would be needed to sustain the practice. A training module written in plain language, with worked illustrations for officers without an accounting background, was left with the enterprise.

3.3. Legal literacy on village fund governance

The session, held in the village hall on 13 January 2026, was attended by 32 participants comprising village officials, members of the village deliberative body, community leaders and residents. The discussion that followed the presentation concentrated on three matters raised repeatedly by participants: the mechanism by which village fund allocations are decided, the form in which the village government is obliged to account for expenditure, and the entitlement of residents to obtain that account. A pocket guide was produced and distributed, covering the statutory basis of village fund management, the principles of village financial governance, the public's information rights and the avenues through which residents may exercise oversight.

What can be verified from this intervention is narrower than what the session appeared to achieve. The attendance record, the questions raised and the guide itself are documented; a change in participants' knowledge is not, because no instrument was administered. The substantive result is therefore that the village now possesses a durable, plain-language reference on budget transparency that did not exist before, held by the officials and community leaders who convene its deliberative forums. Figure 3 documents the session and the guide.



Figure 3. Legal literacy session on transparency and accountability in village fund management: (a) presentation of the material; (b) open question session with participants; and (c) cover of the pocket guide distributed to participants

Source: Programme documentation, 2026.

3.4. Household organic waste composting

Twenty participants attended the session on 23 January 2026, drawn from farming households and homemakers with representatives from each hamlet, including hamlet heads. After a briefing on the waste situation, participants carried out the composting process themselves, using household organic residues, rice husk, soil and an activator, with the stages of preparation, collection, mixing and layering performed by participants rather than demonstrated to them. A batch was left in fermentation at the village post as a learning reference, and a short practical guide was produced. The intervention is reported as a capability demonstration with a physical output; whether households subsequently composted at home was not measured.

3.5. Integrated village profile

Before the programme, the village's public self-description consisted of a brief infographic that captured neither the structure of village government nor the range of local potential. The team compiled general village information, the governance structure and the village's productive assets stone crafting, agriculture, livestock and tourism sites into a single profile and published it on a public website designed to be updated by village staff. The verifiable change is the existence and accessibility of an integrated record where none previously existed.

3.6. Digital tourism information

Field data collection covered each tourism asset in the village and recorded location, history, cultural significance, facilities and access, supported by interviews with village officials, site managers, community leaders and local enterprise operators, and by photographic documentation. The compiled material was verified and published as a responsive website, and the site address was encoded as QR codes printed for placement at the village office and at the sites themselves, allowing a visitor to retrieve full information by scanning rather than by asking.

The website and QR codes were demonstrated and formally handed to the village government and site managers at the close of the programme, together with instruction on updating the content.

3.7. Summary of status change

Table 3 consolidates the position before and after the programme in each domain, with the evidence by which each change can be checked, and Figure 4 records two occasions on which programme outputs passed into the hands of village institutions.

Table 3. Status before and after the programme, with verification evidence

Domain	At assessment	At handover	Verification evidence
Village fund governance	No reference material; no forum explaining information rights	Plain-language pocket guide in circulation; 32 officials, community leaders and residents briefed	Printed guide; attendance record
Village-owned enterprise	No complete statements for the preceding year; dependence on external support	Statements reconstructed for 2024 and 2025; one monthly report prepared unaided	Cash book, operational ledger, inventory record, balance sheet and profit and loss statement, reviewed with the district facilitator
Village information and potential	Brief infographic only	Integrated village profile published and publicly accessible	Live website
Tourism information	Word-of-mouth circulation; no independent visitor access	Tourism website live; QR access points printed and handed over	Live website; printed QR codes; handover record
Household organic waste	No managed site; organic waste discarded, burned or accumulated	Composting demonstrated and performed by 20 participants; guide distributed	Compost batch in fermentation; practical guide; attendance record

Source: Programme records and artefact inspection, 2026.

Notes: Entries record change in information status, not measured change in knowledge or behaviour; no standardised instrument was administered.



Figure 4. Transfer of outputs to village institutions: (a) close of the BUMDesa accounting training at the village office; and (b) the results seminar at which programme outputs were presented and handed over to the village government

Source: Programme documentation, 2026.

3.8. Constraints encountered

Three constraints affected delivery. The engagement cycle was short, which compressed each intervention into one or two contacts and left no interval in which practice could be observed. Attendance records were kept for two of the five interventions only, so participation in the profile and tourism components cannot be quantified. And the enterprise officers, while able to prepare a monthly report by the close of mentoring, stated that they did not yet consider the practice self-sustaining.

4. Discussion

The programme's organising claim is that the deficits addressed in five apparently unrelated domains were manifestations of one condition. The results support that reading. In each domain the obstacle was not the absence of an asset but the absence of a legible account of it: an enterprise that traded without books, a village that held tourism assets no visitor could find, a government whose budgeting residents could not examine, a waste stream nobody had been shown how to treat. Framing these as one problem is not merely an organising convenience. It implies that interventions which produce durable information artefacts should outperform interventions that transmit information orally, and the evidence here is consistent with that implication.

The sharpest finding concerns the difference between bounded and diffuse partners. The enterprise intervention produced an unambiguous, independently checkable change: two years of statements where none existed, and officers able to prepare a monthly report without assistance. The legal literacy intervention, delivered to a larger and more heterogeneous audience, produced an artefact and an attendance record but no demonstrable change in any participant. The difference is not one of effort or quality. It follows from the structure of the two situations. The enterprise had a small group of named people holding a defined duty, a concrete task on which to practise, and an external reviewer with an interest in the result. The literacy session had none of these: no individual in the room carried a specific obligation discharged by attending, and no task followed from it. Bovens's (2007) account of accountability as a relation between an actor and a forum helps explain why. The enterprise intervention supplied the forum with the account it had been missing. The literacy intervention addressed a forum that was not yet convened and gave it nothing new to examine.

This is a design lesson rather than an argument against public literacy work. It suggests that where the audience is diffuse, the intervention should attach itself to an occasion on which someone must act a village assembly at which the new statements are presented, for instance — rather than stand alone. It also indicates where engagement programmes should concentrate scarce contact time when the cycle is short.

The second finding concerns complementarity. The interventions were sequenced so that the assessment fed the village profile, and the profile in turn supplied verified material for the tourism website; the same visits that mapped micro-enterprises identified the hamlet representatives who later attended the composting session. These dependencies were operational rather than theoretical, and they reduced duplicated effort in a way that five separate programmes could not have achieved. More substantively, the enterprise statements and the literacy guide act on the same accountability relation from opposite ends: one produces an account, the other prepares an audience to read it. Ostrom's (1996) argument that public outcomes require complementary capabilities on both the official and citizen sides is directly applicable, and supplies the strongest justification for the integrated design.

The digital components warrant a more guarded reading than engagement reporting usually gives them. A website and a QR code are artefacts, and their existence is not an outcome. Whether they change anything depends on whether village staff update the content, whether the codes remain legible in the field and whether visitors scan them — none of which this programme observed. The adoption literature is unambiguous that village information systems fail at exactly this point, defeated by the competence and incentive structures around the officials expected to maintain them rather than by the technology (Sihotang et al., 2023), and the broader development informatics tradition has long warned against treating deployment as achievement (Walsham, 2017). The appropriate claim is therefore that the village now has information infrastructure it previously lacked, and that the question of use remains open.

The results also speak to the condition of village-owned enterprises more generally. Kase et al. (2024) attribute their underperformance primarily to managerial and entrepreneurial capability rather than to market conditions, and recommend structured capacity development. The experience here refines that recommendation in one respect: what worked was not training in advance of practice but mentoring inside it. Officers reconstructed their own ledgers rather than watching a worked example, which produced both the statements and, by the end, the capability to repeat the exercise. That distinction — between instruction and accompanied practice — may matter more than the curriculum content. The same reading applies beyond village enterprises: Anatan and Nur (2023) find that limited managerial and marketing capability, rather than infrastructure, constrains the digital readiness of Indonesian small enterprises, and identify university knowledge transfer as a workable route to addressing it.

Transferability is plausible but conditional. The design requires a village small enough to assess household by household, an interdisciplinary team able to cover legal, financial, technical and communication domains simultaneously, and at least one bounded partner with a defined duty on which concentrated effort can be spent. The material cost was modest and within the means of a standard student engagement allocation. Villages that already hold under-documented assets, as Allakuang did, are the most favourable setting, because the work consists of making visible what already exists rather than creating something new. The implication for policy is that support for village governance may yield more from building the capability to produce and publish information than from issuing further reporting requirements to villages that cannot yet meet the existing ones (Lewis, 2015).

Four limitations bound every claim above. First, no standardised instrument was administered, so no change in knowledge, skill or attitude is measured anywhere in this article; what is reported is change in the information status of the village, evidenced by artefacts. Second, the programme recorded no post-engagement follow-up, so retention, website maintenance and household composting practice are all unknown. Third, attendance was recorded for only two of the five interventions. Fourth, the design covers one village with no comparison case, so the integrated framing is illustrated here rather than tested. These limitations are a consequence of a short engagement cycle and of evaluation arrangements fixed after the interventions had been designed; both are correctable, and the correction is specified in the conclusion.

5. Conclusion

This programme set out to raise the capability of one Indonesian village to produce, hold and publish the information on which its own governance depends, and to examine whether interventions addressing that deficit from several directions reinforce one another. On the first objective the evidence is uneven but real. The village-owned enterprise moved from having no

complete financial statements for a year to holding a reconstructed set for 2024 and 2025, with officers able to prepare a monthly report unaided; the village moved from a brief infographic to an integrated published profile, and from word-of-mouth tourism information to a website with QR access points in the field. Thirty-two officials, community leaders and residents were briefed on budget transparency and left with a plain-language reference, and twenty participants performed composting themselves and retained a guide.

On the second objective the programme offers a clear and somewhat uncomfortable lesson. The integrated design produced genuine operational complementarities, but the domains did not respond equally. Change was sharpest where a small number of named people held a defined duty and had a concrete task to practise on, and weakest where the audience was large and no obligation followed from attendance. The principal contribution of this article is therefore not the five interventions themselves but that distinction, which is available to anyone designing an engagement portfolio under a short cycle.

The partner's problem was addressed in substance but not resolved. The village now holds information artefacts it did not hold before, and that condition is durable in a way that a training event is not. Whether those artefacts are maintained, read and acted upon is unestablished, and this article does not claim otherwise. Sustainability rests on three things already in place: the reconstructed ledgers and the module beside them, the two websites under village control, and the working relationship with the district facilitator who reviewed the statements and can continue to do so.

Three steps follow for subsequent programmes. Fix the evaluation design before the interventions are designed, so that a documented baseline exists and a simple instrument can be administered on both sides of each activity. Build a follow-up contact into the cycle at three and six months, sufficient to establish whether ledgers are still being kept, websites still updated and compost still made. And attach diffuse-audience interventions to an occasion on which someone must act, so that the information supplied has a forum waiting to receive it.

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