



DEVELOPMENT PARTNERSHIP | 2026 PRACTITIONER EDITION

Development Partner STEM Due Diligence Guide

A decision framework for testing relevance, delivery capability, safeguarding, whole-life cost, evidence and responsible exit.

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For foundations, multilaterals, bilateral partners, CSR teams, NGOs, investors and public institutions supporting STEM education.

FIELD-TESTED THINKING | PRACTITIONER TEMPLATES | EVIDENCE ANCHORS

What this manual helps you decide

Move from idea to explicit decisions, owners, evidence and next actions.

1	Test the problem before admiring the solution	A persuasive demonstration does not establish that the programme addresses a priority problem for the intended learners or system.
2	Distinguish founder energy from institutional capacity	A strong leader may open doors, but delivery at scale requires governance, people, systems and learning routines.
3	Interrogate the whole delivery system	Curriculum, teachers, access, operations and evidence must work together under the same constraints.
4	Price the complete operating requirement	Low acquisition price can conceal high support, renewal, integration, data and exit costs.
5	Fund learning gates, not predetermined scale	Responsible partnership makes continuation conditional on evidence and plans the afterlife from the beginning.
6	90-day application	Use a 90-day diligence cycle to verify context, observe delivery, test risk and agree evidence-led funding conditions.

Use the manual as a decision cycle

1 OBSERVE	2 DECIDE	3 ASSIGN	4 REVIEW
Start with the ordinary operating condition, not the launch-day exception.	Record the choice, the alternatives rejected and the assumption carrying the most risk.	Name one accountable owner, the supporting actors and the evidence they must produce.	Set a date and define what evidence will trigger continuation, repair, redesign or stop.

A completed template is not evidence of success. Pair every decision with an observable artefact, a named owner and a scheduled review.

Test the problem before admiring the solution

A persuasive demonstration does not establish that the programme addresses a priority problem for the intended learners or system.

Due diligence should begin with context, public value, additionality and fit with curriculum and institutional priorities.

DESIGN MOVE	WHAT IT REQUIRES	EVIDENCE TO KEEP
Problem	Verify the need, affected population, baseline, existing provision and structural causes.	Independent problem evidence and stakeholder voice
Fit	Connect the proposal to curriculum, policy, school calendars and responsible public owners.	Alignment map and institutional confirmation
Additionality	Explain what the funding enables that credible actors would not otherwise deliver.	Counterfactual and alternative analysis
Demand	Test willingness and practical ability of schools, teachers, learners and families to participate.	Observed demand and burden assessment

Decision questions

1. Whose problem definition shaped the proposal?
2. What existing initiative could be strengthened instead of duplicated?
3. What would happen without this grant?
4. Which assumption depends on exceptional rather than ordinary conditions?

Decision gate

PROCEED WHEN	PAUSE OR REDESIGN WHEN
The problem, public value and institutional fit are verified beyond the applicant narrative.	The case is driven by novelty, visibility or a preselected technology.

Field application

Visit or observe two ordinary delivery sites and one comparable non-participating site. Record contradictions between proposal assumptions and operating reality.

Distinguish founder energy from institutional capacity

A strong leader may open doors, but delivery at scale requires governance, people, systems and learning routines.

Assess whether capability is distributed, documented and resilient to staff change, growth and external scrutiny.

DESIGN MOVE	WHAT IT REQUIRES	EVIDENCE TO KEEP
Governance	Review decision rights, conflicts, oversight, risk appetite and escalation.	Board records and responsibility map
Delivery	Test curriculum, facilitation, logistics, support, quality assurance and adaptation capability.	Observed delivery and operating records
People	Examine role clarity, workload, safeguarding competence, retention and succession.	Staff profile and capacity plan
Learning	Look for honest incident review, evidence use, repair cycles and documented improvement.	Management response and change history

Decision questions

1. What stops if the founder is absent for three months?
2. Which capability exists locally rather than in a proposal partner?
3. Can the organisation explain a failure and resulting redesign?
4. Is growth already weakening quality or staff wellbeing?

Decision gate

PROCEED WHEN	PAUSE OR REDESIGN WHEN
Core delivery, governance and learning functions are evidenced and not concentrated in one person.	Capability claims depend on biography, awards or unaudited reach figures.

Field application

Choose one past programme and trace planning, delivery, incident, financial and outcome records from start to close. Gaps reveal operating maturity.

Interrogate the whole delivery system

Curriculum, teachers, access, operations and evidence must work together under the same constraints.

A programme should specify dosage, progression, participation, teacher ownership, support, continuity and recovery - not only activities.

DESIGN MOVE	WHAT IT REQUIRES	EVIDENCE TO KEEP
Learning	Review capability progression, pedagogy, assessment and transfer into new contexts.	Curriculum pathway and learner work
Access	Test timetable, class size, devices, connectivity, disability, language, gender and travel.	Access model and disaggregated baseline
Operations	Examine procurement, inventory, maintenance, consumables, data and incident response.	Operating plan and failure rehearsal
Ownership	Define what schools and public institutions decide, contribute, learn and inherit.	Responsibility and handover agreement

Decision questions

1. How much active learning does each learner receive?
2. What happens when the trained teacher or connection is unavailable?
3. Which group is most likely to be present but underserved?
4. What capability remains at the institution after delivery?

Decision gate

PROCEED WHEN	PAUSE OR REDESIGN WHEN
The design survives an ordinary-week stress test and has clear local ownership.	Success depends on continuous external facilitation or ideal infrastructure.

Field application

Simulate the busiest programme day with one critical failure. Require the team to protect learning, safety, evidence and communication in real time.

Price the complete operating requirement

Low acquisition price can conceal high support, renewal, integration, data and exit costs.

Investment appraisal should compare credible options using whole-life cost, capability delivered, risk and reversibility.

DESIGN MOVE	WHAT IT REQUIRES	EVIDENCE TO KEEP
Cost	Include people, infrastructure, licences, support, consumables, maintenance, evaluation and replacement.	Three-year total-cost model
Procurement	Use functional requirements, transparent scoring, conflict controls and acceptance testing.	Procurement file and decision record
Safeguarding	Test governance, reporting, digital risk, data protection and partner conduct.	Safeguarding diligence and action plan
Exit risk	Assess lock-in, data portability, local alternatives, asset ownership and continuity after funding.	Exit conditions and transition budget

Decision questions

1. Which recurring cost has no future owner?
2. What risk is transferred to the school or learner?
3. Can the programme switch supplier or delivery mode?
4. What acceptance evidence is required before payment?

Decision gate

PROCEED WHEN	PAUSE OR REDESIGN WHEN
The preferred option remains credible under cost, failure and exit scenarios.	Value is inferred from a low unit cost that ignores dosage, quality or sustainability.

Field application

Recalculate cost per learner using only participants who receive the minimum intended dosage and complete the capability assessment. Compare with the headline figure.

Fund learning gates, not predetermined scale

Responsible partnership makes continuation conditional on evidence and plans the afterlife from the beginning.

Release capital in stages tied to readiness, quality, safeguarding, equity and continuity - with permission to repair or stop.

DESIGN MOVE	WHAT IT REQUIRES	EVIDENCE TO KEEP
Claims	Require definitions, denominators, methods, disaggregation, limitations and source ownership.	Claim-evidence register
Gates	Set decision dates and thresholds for proceed, proceed with conditions, redesign or stop.	Stage-gate schedule and minutes
Learning	Fund independent challenge, participant voice, adaptation and dissemination of negative findings.	Learning agenda and management response
Exit	Specify institutional capability, data, assets, licences, funding and support that remain.	Costed transition and continuity test

Decision questions

1. What evidence can genuinely change the funding decision?
2. Who owns and can reuse the data and learning assets?
3. What does success look like two years after the grant?
4. Can partners stop responsibly without abandoning learners?

Decision gate

PROCEED WHEN	PAUSE OR REDESIGN WHEN
Funding gates are real, evidence is contestable and the exit model is costed from inception.	Scale is politically or contractually predetermined and evidence serves only reporting.

Field application

Write the final-year scenario before signing year one. Name every capability, cost, contract, dataset and responsibility that must transfer for the programme to endure.

Move from proposal review to investment decision

Use a 90-day diligence cycle to verify context, observe delivery, test risk and agree evidence-led funding conditions.

PERIOD	GATE	FIELD WORK	OUTPUT
Days 1-15	Diagnose	Observe ordinary conditions, establish the baseline and name the highest-risk assumptions.	Approved baseline and decision register
Days 16-30	Design	Select a bounded use case, define responsibilities and agree the evidence standard.	Signed design brief and risk controls
Days 31-60	Pilot	Run repeated practice under normal constraints; log failures, adaptations and participant experience.	Pilot evidence pack and repair log
Days 61-75	Review	Compare intended capability with observed performance and test equity, cost and continuity.	Review decision with conditions
Days 76-90	Institutionalise	Assign recurring ownership, budget, cadence and escalation routes before expansion.	Operating plan and next review date

Decision record

Problem and beneficiary	_____
Institutional owner	_____
Partner capability risk	_____
Delivery assumption	_____
Whole-life cost	_____
Safeguarding condition	_____
Evidence gate	_____
Exit requirement	_____

The strongest partnership is not the one that promises effortless scale. It is the one that makes trade-offs, uncertainty, accountability and the route to durable local capability visible.

Evidence anchors and further reading

The frameworks translate public guidance and implementation evidence into practical decision tools.

SOURCE	RESOURCE	ADDRESS
Ghana Ministry of Education	Education Strategic Plan 2018-2030 (2018)	https://moe.gov.gh/edge/content/uploads/2019/05/Education-Strategic%20Plan-2018-2030.pdf
UNESCO GEM Report	Technology in education: A tool on whose terms? (2023)	https://gem-report-2023.unesco.org/
UNICEF Innocenti	Digital Learning, Real Classrooms: Implementation Research in Ghana (2025)	https://www.unicef.org/innocenti/reports/digital-learning-real-classrooms
African Union	Continental Artificial Intelligence Strategy (2024)	https://au.int/en/documents/20240809/continental-artificial-intelligence-strategy
African Union	Continental Education Strategy for Africa 2026-2035 (2025)	https://static.au.int/en/documents/20250616/continental-education-strategy-africa-2026-2035
World Bank	Devices for Education Knowledge Pack (2025)	https://documents1.worldbank.org/curated/en/099916207092523135/pdf/IDU-88a5de28-77c9-40f7-a841-9d425cdc505d.pdf

Use these sources as starting points. Confirm current law, policy, curriculum and regulator guidance before making consequential institutional decisions. This manual is an implementation aid, not legal, financial or safeguarding advice.

Evidence quality protocol

CHECK	QUESTION	RECORD
Currency	Is the source still current for the decision date, jurisdiction and learner group?	Version, publication date and date checked
Authority	Is it primary guidance, independent research, implementation evidence or vendor material?	Source type and responsible institution
Fit	Do its assumptions match the school, infrastructure, language, staffing and safeguarding context?	Transfer limits and local verification needed
Use	Which decision does this source inform, and what would cause that decision to change?	Decision link, owner and review trigger

Fund capability that can outlast the grant

A practical contribution to stronger AI, coding, robotics and STEM education systems in Ghana and Africa.

The value of a framework is not the elegance of its diagram. It is the quality of the decisions, routines and learning that it makes possible.

About Jonathan Kennedy Sowah

Jonathan is a Ghanaian AI engineer and K-12 STEM systems builder working across robotics, coding, applied artificial intelligence, teacher development and context-aware education technology. His wider portfolio has reached 25,000+ learners, trained 2,500+ educators and engaged 100+ schools. KodeVR has more than 10,000 active learners.

He works with schools, governments, companies and development partners to turn high-visibility technology ambitions into practical learning systems that can operate under real African conditions.

Use this work responsibly

Adapt the tools to the programme, participants, institution and regulatory context. Record assumptions. Seek qualified technical, legal, safeguarding, financial and evaluation review where the decision requires it.

Before commissioning implementation support

QUESTION	A STRONG ANSWER SHOULD NAME
What capability must remain after the engagement?	The learner, teacher and institutional behaviours that should continue without external supervision.
What conditions shape delivery?	The ordinary timetable, infrastructure, language, safeguarding, procurement and maintenance realities.
How will quality be governed?	Decision owners, evidence definitions, review cadence, repair route and stop-or-scale thresholds.
What will the institution inherit?	Reusable learning assets, local capability, documented routines, data rights and an affordable continuity plan.

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