EDGE5 / OPERATIONAL FRAMEWORK SERIES / 05

THE EDGE5

SURVIVAL GATES

Why Systems Fail After Handover

EDGE5 INDEPENDENT DESIGN AUTHORITY

PURPOSE

Many systems appear successful during active funding, project supervision, contractor involvement, and implementation phases.

The real test comes later — after support reduces.

This review introduces the EDGE5 Survival Gates — the core operational conditions that determine whether systems continue functioning under real conditions after external support declines.

Most long-term failures occur because one or more survival gates were never realistically assessed.

> **CORE QUESTION**
>
> **What operational conditions must remain functional for this system to survive independently?**

IMPORTANT

Systems rarely fail because communities do not care.

More commonly, systems fail because:

- water access becomes unreliable
- labour demands exceed realistic capacity
- soil and landscape function decline
- operational authority remains external

— skills never transfer locally

These pressures often emerge slowly over time and become most visible during stress periods, after funding decline, after leadership change, after contractor withdrawal, during dry seasons, and after operational transition.

THE FIVE SURVIVAL GATES

The EDGE5 Survival Gates identify the primary operational constraints affecting long-term continuity.

If one or more gates fail, long-term viability becomes vulnerable.

01 WATER ACCESS

CORE QUESTION

Can the system continue functioning during the worst reliable dry period?

Many systems fail because:

— water access declines seasonally
— storage systems become unreliable
— evaporation exceeds retention
— access requires excessive labour
— long-term water function was never realistically assessed

> Water is not rainfall. Water is reliable access under real conditions.

STRATEGIC OBSERVATION

Water instability often becomes visible long after implementation begins. Early landscape and infiltration planning can significantly improve long-term operational continuity.

02 LABOUR CAPACITY

CORE QUESTION

Can the system realistically be maintained using available local labour?

Systems frequently fail because:

— maintenance demands become excessive
— walking distances increase operational burden
— systems require external staffing
— labour peaks exceed realistic household capacity

— operational complexity grows over time

> Infrastructure alone does not create viability. Systems must remain practically manageable.

STRATEGIC OBSERVATION

Systems that exceed realistic labour capacity often become dependent on ongoing external support regardless of initial investment quality.

03 SOIL & LANDSCAPE FUNCTION

CORE QUESTION

Does the landscape improve function over time or gradually decline?

Many systems degrade because:

— runoff increases
— infiltration declines
— erosion expands
— biomass systems weaken
— fertility depends on external inputs

Landscape instability often increases slowly before operational failure becomes visible.

STRATEGIC OBSERVATION

Long-term operational continuity improves when water retention, infiltration, and landscape function strengthen over time rather than decline.

04 AUTHORITY & OWNERSHIP

CORE QUESTION

Can local people operate and adapt the system without outside permission?

Many systems remain externally controlled long after implementation. Common risks include:

— operational decisions remaining external
— local adaptation not occurring
— responsibilities remaining unclear
— contractor dependence continuing
— local ownership remaining weak

> Operational continuity depends on local operational sovereignty.

STRATEGIC OBSERVATION

Systems that remain externally managed after implementation often struggle to maintain long-term continuity after support withdrawal.

05 SKILLS & CONTINUITY

CORE QUESTION

Can local people maintain, repair, adapt, and continue the system independently?

Many systems become vulnerable because:

— knowledge remains concentrated externally
— repair systems are unclear
— replacement inputs are inaccessible
— practical skills fail to transfer locally
— continuity depends on a few individuals

> Training alone does not create continuity. Operational capability must remain locally functional.

STRATEGIC OBSERVATION

Systems that continue functioning after support withdrawal usually demonstrate distributed skills, local adaptation capacity, and practical operational independence.

06 POST-HANDOVER WARNING INDICATORS

If several of the following conditions are present, long-term operational continuity may be vulnerable.

☐ Water reliability declines seasonally
☐ Labour demands exceed realistic local capacity
☐ Soil or landscape degradation increasing
☐ Operational authority remains external
☐ Skills concentrated in a few individuals
☐ Maintenance systems unclear long-term
☐ Dependency on imported inputs increasing
☐ Local adaptation not occurring independently

- ☐ Participation declines after support reduces
- ☐ Systems remain contractor-dependent

STRATEGIC REFLECTION

> Which Survival Gate is currently most vulnerable?

> What operational pressure is most likely to increase over time?

> What currently depends on ongoing external support?

IMPORTANT OBSERVATION

Many long-term operational risks emerge after implementation, after transition, during stress periods, after funding decline, and after operational withdrawal.

Systems that remain locally functional after support withdrawal reduce long-term dependency risk, stakeholder instability, operational fragility, and future liability exposure.

> **EDGE5 PRINCIPLE**
>
> **A system is not complete until it can function without ongoing external support.**

WHEN TO SEEK A FULL EDGE5 OPERATIONAL REVIEW

A deeper operational review may be appropriate where:

— multiple Survival Gates appear vulnerable
— post-withdrawal continuity is uncertain
— landscape pressures are increasing
— operational dependence remains high
— water reliability may decline long-term
— local operational sovereignty remains weak

EDGE5 INDEPENDENT DESIGN AUTHORITY
Operational viability systems for mining, oil & gas, CSR, humanitarian and development, landscape rehabilitation, livelihood continuity and post-handover operational viability.

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