Viable System Model

A neutral reference for organisational diagnosis and design

Core concepts, the seven-step method, editable templates and a fictional worked case

Concepts: Stafford Beer and W. Ross Ashby
Seven-step application method: Martin Pfiffner

Reference edition 1.0 / October 2026

Using this reference

For diagnosis

- Choose one system in focus and a specific concern.
- Trace actual decisions, resources and communication.
- Record evidence, conflicting accounts and unanswered questions.

For design

- Work through the seven steps and revisit earlier choices.
- Use the blank templates as prompts for local agreements.
- Test the proposed arrangements in real work before expanding them.

The reference supports inquiry. It provides no numerical viability score or guarantee of organisational success.

Viability is an ongoing organisational question

Capacity to continue

- The organisation fulfils a purpose in a changing environment.
- Its operating units can respond to the variety they encounter.
- The whole maintains enough cohesion to act together.

Capacity to change

- People detect changes that current routines do not handle.
- They can consider alternatives and commit resources.
- Identity and policy give the organisation continuity as it adapts.

A VSM map describes regulatory functions and relationships. Evidence is still needed to judge how they work.

The system in focus

A boundary statement makes every later mapping easier to interpret.

Field	Working prompt
Purpose	What continuing result does this organisation exist to produce, and for whom?
Boundary	Which activities and decisions belong inside the inquiry? What sits outside?
Environment	Who depends on, supplies, constrains or changes the organisation?
Recursion	What containing system is R+1? Which operational units form R-1?
Time and evidence	Which planning horizon, observation period and evidence sources will we use?

R0 means the chosen system in focus. This reference uses R+1 for the containing level and R-1 for the next contained level.

The environment has several relevant parts

Present operating environment

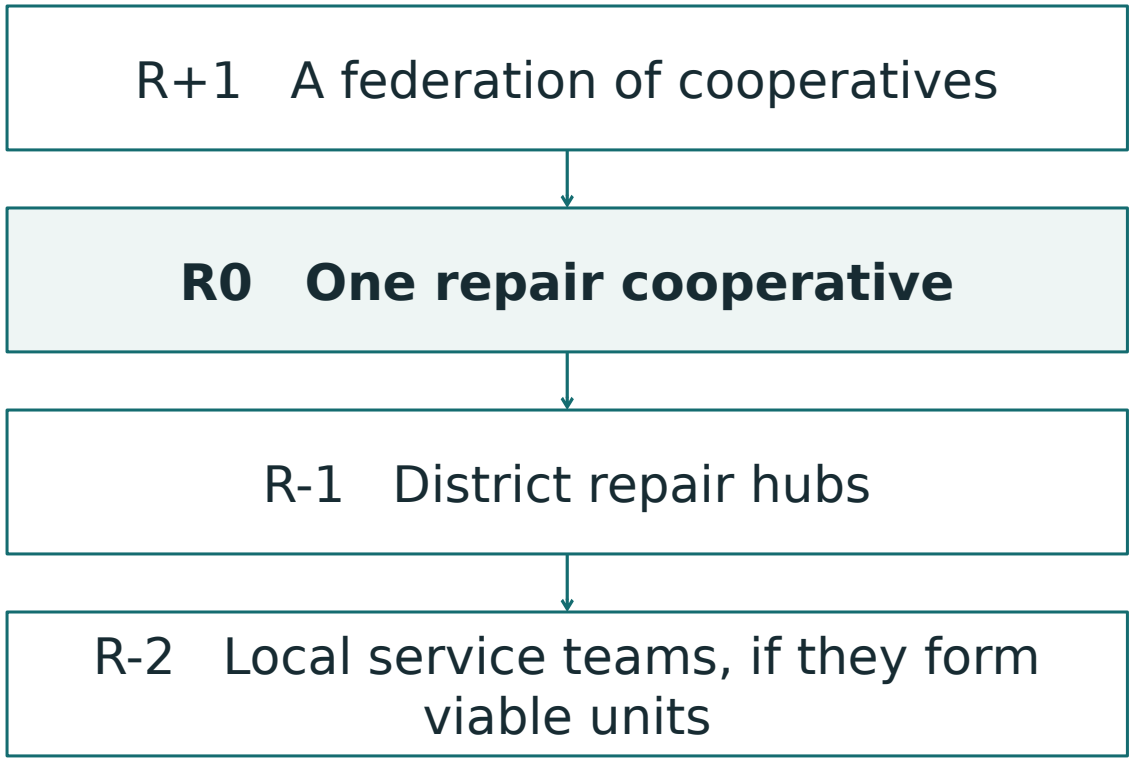
- Customers or beneficiaries with different needs.
- Suppliers, partners and shared infrastructure.
- Current obligations, constraints and resource conditions.

Wider and future environment

- Emerging needs and alternative ways to meet them.
- Changes in technology, society and resource availability.
- Other actors whose choices could change the organisation's purpose or options.

Define the relevant environment for each operational unit and for the whole. It extends beyond a customer list.

Recursion connects capable units



1. Each proposed viable unit needs operating activity and its own regulatory functions.

2. The same person can contribute to more than one function or recursion level.

3. A reporting layer becomes a VSM recursion only when the relevant viable units exist.

Fictional example. Recursion labels are a declared convention, not a measure of seniority.

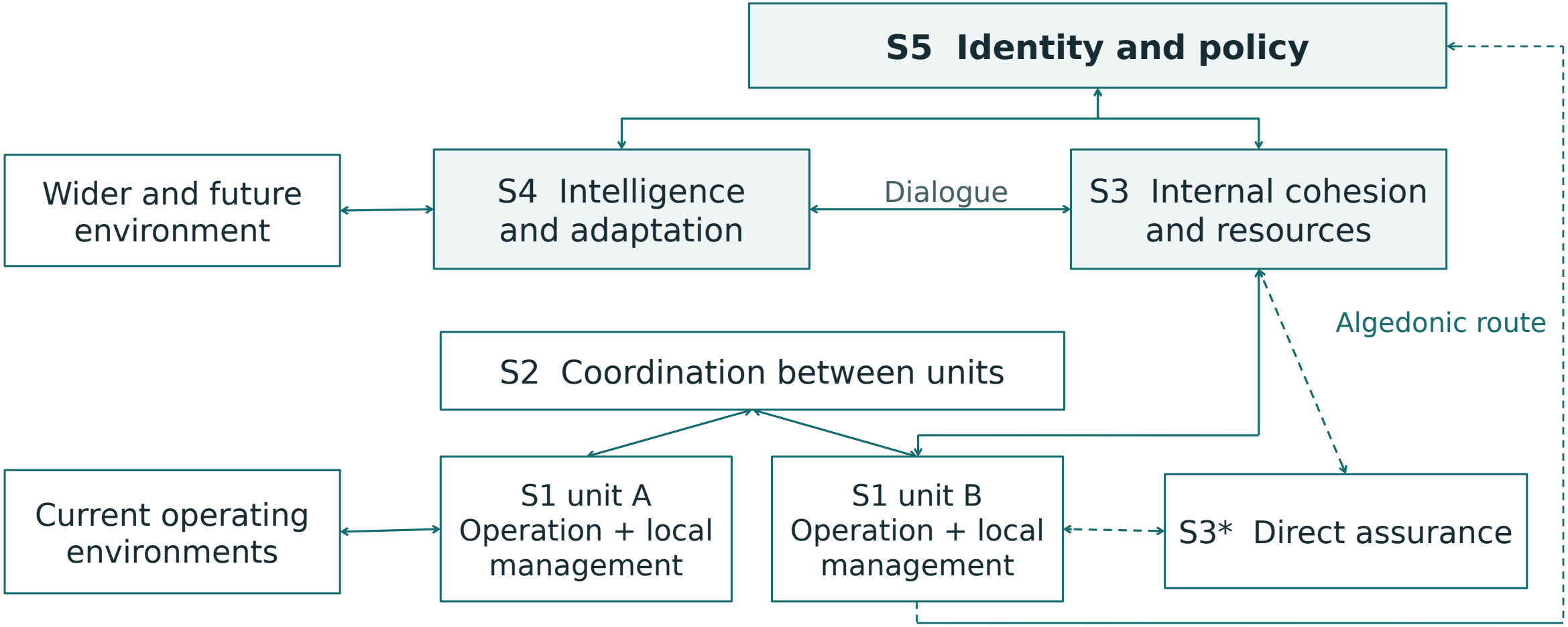
Operational and supporting work

Classify work by its contribution at the chosen recursion level.

Question	Operational unit	Supporting task
Purpose	Delivers a part of the organisation's primary purpose.	Enables operational units or regulatory functions.
Environment	Has a relevant external environment to engage with.	Usually serves internal users at this level.
Autonomy	Needs authority and resources to regulate its work.	Needs a clear service or regulatory mandate.
Mapping	Model the unit and its own management.	Map individual tasks to their VSM functions.

A support organisation can itself be a viable system when it becomes the system in focus.

The VSM functions at one recursion level



Simplified teaching map. S3* is an assurance channel associated with S3. The algedonic route carries exceptional signals beyond routine reporting.

S1: primary operations

Purpose

- Operational units deliver the primary activities of the system in focus.
- Each unit engages with its own relevant environment.
- Local management regulates delivery and adapts within agreed boundaries.

Diagnostic evidence

- Clear outputs and recipients for each unit.
- Resources and decision authority consistent with accountability.
- Local feedback and a working route to request help.
- Results visible without routing every local decision through the centre.

A unit's label on an organisation chart does not establish that it can function as a viable unit.

S2: coordination

Purpose

- Reduce avoidable interference between operating units.
- Provide shared conventions where units depend on one another.
- Help units resolve routine conflicts without constant intervention.

Possible mechanisms

- Capacity calendars and scheduling protocols.
- Compatible information definitions and handover rules.
- Peer coordination and agreed conflict-resolution routes.
- Standards whose purpose and exception process are clear.

S2 needs participation and usable mechanisms. A coordination meeting alone does not demonstrate coordination.

S3: internal cohesion and resource decisions

Purpose

- Manage the whole's current operating capability.
- Negotiate resources and accountabilities with S1 management.
- Resolve issues that exceed local authority or affect the whole.

Diagnostic evidence

- Resource agreements tied to actual commitments.
- Visibility of dependencies, constraints and results.
- Intervention criteria that preserve ordinary local autonomy.
- Decisions that consider the performance of the whole.

S3 needs a reliable dialogue with S4 so that present commitments and future options remain connected.

S3*: direct assurance and operational reality

Purpose

- Complement routine reports with direct information about operations.
- Test whether reported conditions match actual work.
- Bring overlooked constraints and weak signals into view.

Possible mechanisms

- Observation of work and direct conversations.
- Sample reviews, audits and trace-through checks.
- Independent checks of a particular claim or risk.
- A feedback route that records findings and corrective action.

S3* is distinct from S3's resource and intervention role. Its mandate should prevent a second chain of routine management.

S4: intelligence and adaptation

Purpose

- Explore the wider environment and plausible futures.
- Develop an understanding of the organisation and its changing position.
- Form and test options for adaptation.

Diagnostic evidence

- Signals beyond current performance reports.
- Explicit assumptions, scenarios and alternative responses.
- Experiments with learning questions and decision dates.
- A continuing exchange with S3 about feasibility and resources.

S4 connects outside and future concerns to the organisation's present capabilities. Its role extends beyond preparing a strategy document.

S5: identity and policy

Purpose

- Express the identity, purpose and policy of the whole.
- Set the boundaries within which other functions act.
- Resolve fundamental tensions between present operation and future direction.

Diagnostic evidence

- A usable statement of purpose and policy.
- Clear authority for decisions about identity and governing principles.
- A route to hear the S3-S4 debate without taking over all its decisions.
- A process for revising policy when its assumptions fail.

Map the policy function explicitly. A senior title alone does not show that S5 is functioning.

The algedonic channel

Exceptional signals need an agreed route to a level that can respond.

Design element	Working agreement
Trigger	Describe unacceptable states or exceptional opportunities that warrant urgent attention.
Destination	Name the responsible recipient and backup at the appropriate higher level.
Response	Specify acknowledgement, decision authority and an action time suited to the situation.
Escalation	State what happens when the recipient cannot respond or the condition worsens.
Closure	Confirm recovery or resolution with the originator and review the threshold.

Algedonic signals supplement routine channels. A threshold and a reliable response matter more than the label on the alert.

Variety and requisite variety

Variety

- The distinguishable states or situations relevant to a system.
- A practical inquiry asks which differences demand different responses.
- More data does not automatically mean more useful regulatory capacity.

Requisite variety

- Effective regulation needs responses capable of handling relevant disturbances.
- Capacity depends on skills, authority, information, resources and timing.
- A design can reduce avoidable demands or expand appropriate responses.

Conceptual foundation: W. Ross Ashby, An Introduction to Cybernetics (1956), especially chapters 7 and 11.

Variety engineering in everyday work

Choose the intervention after identifying the demand that exceeds response capacity.

Intervention	Example	Question to test
Attenuate avoidable demand	A common intake form prevents repeated clarification.	Does it remove waste while preserving important differences?
Increase response capacity	Local staff gain training and authority for recurring decisions.	Can they now respond safely and promptly?
Improve the channel	A queue separates urgent exceptions from routine updates.	Do signals reach someone able to act?
Change the structure	A unit takes responsibility for a coherent customer need.	Does the new boundary reduce costly dependencies?

These are original application examples. Attenuation should preserve information needed to protect purpose and outcomes.

Subsidiarity combines autonomy with support

Local authority

- Locate decisions close to the information and consequences.
- State boundaries, required outcomes and resource commitments.
- Give units room to select methods appropriate to their environment.

Accountability and help

- Make results and material exceptions visible to the containing system.
- Escalate when a decision exceeds agreed authority or capacity.
- Provide support that helps the unit regain or strengthen its capability.

Review centralisation decisions when capability, risk or dependencies change. Autonomy is a designed relationship.

The seven-step application method

The sequence below follows Martin Pfiffner. Iteration is expected.

Step	Focus	Concrete output
I	Segmentation of operational units	A justified boundary and operational-unit design
II	Manageability	A plan for demand, response capacity and channels
III	Success-critical tasks	A short, explicit inventory of continuing tasks
IV	Central and decentral allocation	Task parts assigned across recursion levels
V	Design of S2 to S5, including S3*	Mandates and mechanisms for each function
VI	Communication channels	Named signals, recipients, timing and response
VII	Representation	An understandable map, role mandates and RASIC

Pfiffner's English edition calls Step III "Mission-Critical Tasks". This reference uses "success-critical tasks" (SCTs).

Step I: segmentation of operational units

Inquiry

- Confirm purpose and the relevant external needs.
- Describe current units, dependencies and management boundaries.
- Develop credible alternative segmentations, such as geography, customer group or service.

Decision

- Compare the options against purpose and environmental differences.
- Consider whether each unit can regulate its own work.
- Record tradeoffs, assumptions and the evidence needed to revisit the choice.

Output: a proposed set of S1 units, the rationale for the boundary and the issues that require a further recursion-level inquiry.

Segmentation comparison template

Use explicit criteria and evidence. The table structures judgement rather than computing viability.

Criterion	Current structure	Option A	Option B
Fit to external needs	Evidence / uncertainty	Evidence / uncertainty	Evidence / uncertainty
Ability to own an outcome	Assessment	Assessment	Assessment
Important dependencies	Assessment	Assessment	Assessment
Local regulatory capability	Assessment	Assessment	Assessment
Cost and transition constraints	Assessment	Assessment	Assessment
Decision and conditions	Keep / revise / investigate	Keep / revise / investigate	Keep / revise / investigate

Define the criteria with affected people. If using weights, record who chose them and how sensitive the choice is to those weights.

Operating design for a candidate S1 unit

Test	Evidence to seek
Purpose contribution	A continuing outcome that matters to the system in focus.
Relevant environment	Identifiable users, partners and constraints that the unit can engage with.
Regulatory capacity	Local management, feedback and sufficient skills to respond.
Authority and resources	Control over decisions and resources needed to meet commitments.
Coherence with the whole	Shared policy, agreed accountabilities and workable coordination.
Recursion potential	A credible way to identify viable subunits when that level needs examination.

These prompts are qualitative design checks. Passing a checklist does not establish long-term viability.

Step I example: district repair hubs

Proposed design

- A fictional cooperative serves local households through district hubs.
- Each hub owns the customer relationship and repair outcome.
- Each hub manages a team, equipment capacity and an operating budget.

Why this may fit

- Travel distance and local demand differ between districts.
- Most repair decisions can remain close to the work.
- Shared purchasing and specialist assistance still need agreements.
- Evidence on demand and dependencies must confirm the design.

Illustrative design assumption. It is not a finding about a real organisation.

Step II: manageability

Demand on management

- How different are the units' environments and operating situations?
- Which interdependencies create recurring conflicts?
- How quickly do conditions change? Which decisions wait too long?

Capacity to respond

- Which decisions can units resolve themselves?
- Which coordination mechanisms reduce recurring interference?
- Can the whole process exceptions at the required speed?
- Are reporting and assurance channels accurate enough to act on?

The count of units is only one factor. There is no universal maximum span or layer count in this reference.

Manageability evidence template

Demand or bottleneck	Observed evidence	Candidate change	Expected effect
Decision class	Volume, delay, rework	Authority, skill or rule	Observable outcome
Shared dependency	Conflict episodes	Coordination mechanism	Less interference
Exceptional condition	Signal and response times	Escalation or support	Earlier effective action
Missing information	Decisions made with gaps	Direct observation or channel	Better-grounded decisions

For each change, name an owner and a review date. Keep the baseline evidence so that the effect can be examined.

Manageability can improve in several ways

Possible changes

- Remove approval steps that add no useful regulation.
- Improve local capability and access to expertise.
- Agree peer coordination for recurrent dependencies.
- Improve the clarity and speed of exception reporting.

Design caution

- A flatter structure can increase the demands on the remaining channels.
- Standardisation can hide meaningful differences if applied too broadly.
- New reporting can consume the capacity it was intended to support.
- Test the change against actual work and failure conditions.

Choose a change for its expected regulatory effect. Fewer layers is not an end in itself.

Step III: success-critical tasks

Where tasks come from

- Promises and continuing needs in the environment.
- The regulation of each unit's operating activity.
- Overlaps between units' environments and resources.
- Adaptation, identity and obligations of the whole.

A useful SCT

- Describes work that must recur or remain available.
- Names an observable result and the condition that calls for it.
- Has a clear recursion level and purpose contribution.
- Can be allocated without hiding materially different task parts.

A project may establish an SCT mechanism. The ongoing task remains after the project closes.

A useful SCT statement

Element	Prompt	Fictional example
Continuing action	What work must recur?	Maintain sufficient repair capacity in each district.
Outcome	What continuing result matters?	Customers receive realistic commitments that hubs can meet.
Trigger or cadence	When does the task run?	Weekly review and whenever a material capacity exception occurs.
Evidence	How do we know the task works?	Commitments, waiting time, rework and unresolved exceptions.
Boundary	At what level and with which limits?	Hub level, with agreed routes for shared specialist capacity.

Write the task in ordinary language before assigning a VSM label or a role.

SCT inventory template

ID and task	Purpose / trigger	Level and function	Evidence / gap
SCT-01: task statement	Result and when needed	R0 or R-1; VSM function	Current mechanism and evidence
SCT-02: task statement	Result and when needed	R0 or R-1; VSM function	Current mechanism and evidence
SCT-03: task statement	Result and when needed	R0 or R-1; VSM function	Current mechanism and evidence
SCT-04: task statement	Result and when needed	R0 or R-1; VSM function	Current mechanism and evidence

Add dependencies, proposed owner, approval authority and review date in the detailed task record.

SCT priorities, consequences and evidence

Priority discussion

- What fails if this task is absent or unreliable?
- How soon would the consequences matter?
- Can another mechanism currently cover the need?
- Which uncertainty would most change the decision?

Record the judgement

- State the evidence and the people consulted.
- Separate observed failures from plausible risks.
- Identify dependencies between proposed improvements.
- Keep the task inventory small enough to discuss, with detail linked beneath it.

Priorities reflect the organisation's context and policy. The number of SCTs is a facilitation choice.

Step IV: allocation across recursion levels

Allocation inquiry

- Which task parts benefit from local information and response?
- Which parts require common policy or shared capability?
- Where do consequences cross the unit boundary?

Allocation agreement

- Specify the work at each level and the decision authority.
- Define the result each side owes the other.
- Provide an exception route and a way to request support.
- Record why this allocation is preferable under current conditions.

Allocation can divide task parts. A broad label such as "central" hides who decides, delivers and checks.

Allocation decision template

Consideration	Local contribution	Containing-level contribution
Knowledge and responsiveness	Use detailed knowledge of the situation.	Provide expertise or capacity unavailable locally.
Effects on other units	Coordinate where direct agreements suffice.	Resolve material effects that exceed local mandates.
Policy and obligations	Apply requirements and report exceptions.	Set common boundaries and required assurances.
Shared resources	Specify needs and fulfil commitments.	Maintain the shared service and allocation rules.
Review condition	Name the evidence of local capability.	Name the event that would change the allocation.

There is no universal centralisation rule. Use the same explicit reasoning for each significant task part.

Example: purchasing has several task parts

Fictional repair cooperative. This is a candidate allocation for discussion.

Task part	District hub	Cooperative level
Identify local need	Specify parts, quantities and urgency.	Maintain common item definitions.
Select ordinary items	Choose within approved catalogue and budget.	Maintain supplier framework and common conditions.
Handle unusual items	Explain the need and local consequences.	Provide specialist review when the agreed boundary requires it.
Review service performance	Report delays, defects and local workarounds.	Review supplier performance and shared capacity.

Approval authority belongs in the agreement. RASIC accountability alone does not confer permission to approve a purchase.

Boundary and support agreement template

Field	Agreement to record
Parties and purpose	Which levels or units make the agreement, and what outcome does it support?
Local authority	What can the unit decide without additional permission?
Shared obligations	What must each party provide, and by when?
Support and exceptions	How does the unit obtain help? Which conditions trigger escalation?
Evidence and review	Which signals show the agreement works? Who changes it when conditions change?

A support agreement should make the lower-level unit more capable while protecting the whole's commitments.

Step V: design of the regulatory functions

Map the work

- Group task parts by the function they serve.
- Make S2, S3, S3*, S4 and S5 explicit at the chosen recursion.
- Identify the roles and mechanisms that already do useful work.

Design the mechanisms

- Clarify purpose, authority and inputs for each function.
- Provide people, time and tools matched to demand.
- Define outputs and the recipient who can use them.
- Check for missing functions and competing mandates.

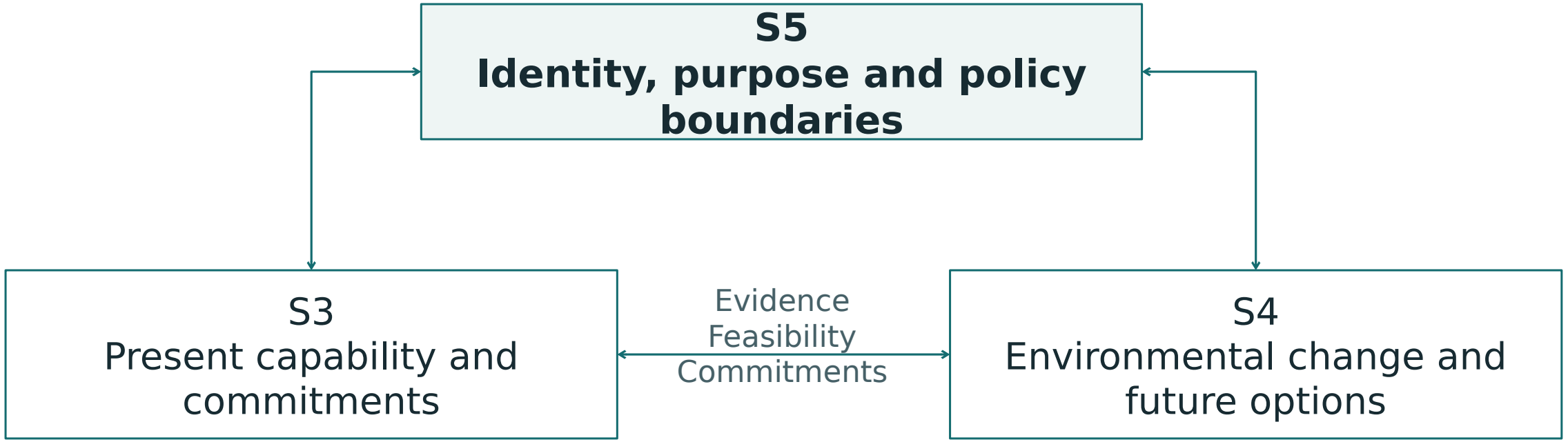
One committee can serve several functions, provided its agenda, authority and outputs make those functions clear.

Function design worksheet

Function	Continuing task	Mechanism and owner	Evidence of operation
S2	Coordinate a recurring dependency.	Protocol, forum or shared tool	Conflicts resolved at the intended level
S3	Agree resources and operating commitments.	Accountable role and review	Decisions lead to clear commitments
S3*	Check a material claim against reality.	Direct check and assurance owner	Findings receive a response
S4	Develop and test an adaptation option.	Inquiry, experiment or strategy forum	Learning informs a decision
S5	Maintain purpose and policy.	Governing role or body	Policy resolves a real tradeoff

Template entries illustrate the function. Replace them with the organisation's actual SCTs, mandates and evidence.

The S3-S4 dialogue under S5



A decision can preserve current commitments, fund an option, revise policy or request more evidence.

S5 protects the policy context for this dialogue and resolves fundamental tensions when needed. It need not decide every operational or strategic detail.

Support tasks and VSM functions

A functional department can contribute to several VSM functions.

Example task	Possible function	Reason for the mapping
Synchronise access requests between units	S2	Coordinates a shared service dependency.
Allocate a shared support budget	S3	Commits resources for the present whole.
Check a sample of access decisions	S3*	Tests whether actual practice meets the stated conditions.
Explore a future service platform	S4	Develops an adaptation option.
Set organisation-wide principles	S5	Defines policy boundaries for future decisions.

Map the task, recursion level and real authority. A department name is insufficient evidence for a VSM assignment.

Step VI: communication channels

A usable channel

- Carries a signal that the recipient can interpret.
- Reaches someone with the capacity and authority to respond.
- Arrives soon enough for the intended action.
- Includes feedback that confirms understanding and closure.

Design properties

- Capacity matches normal demand and exceptional bursts.
- Definitions and context survive translation between roles.
- Cadence and response time match the pace of the work.
- Access, reliability and backup routes suit the information.

A channel includes people, meaning and action. Naming a software tool or a recurring meeting leaves much of the design unresolved.

Channel matrix: present operations

Relationship	Signal or exchange	Purpose and expected response
Environment and S1	Needs, commitments, outcomes and feedback	Adapt local delivery and confirm whether needs are met.
S1 and S1	Dependencies and handovers	Coordinate routine unit dependencies.
S1 and S2	Schedules, conventions and unresolved conflicts	Reduce repeated interference and clarify exceptions.
S1 management / S3	Resources, results and material exceptions	Agree commitments and provide support or intervention.
S2 / S3	Coordination exceptions and common constraints	Resolve wider conflicts and improve shared coordination.
Operations / S3* / S3	Direct observations and assurance findings	Give S3 checked findings and track the response.

For every row, specify both directions of exchange where they are needed. Add the channel specification on slide 42.

Channels for adaptation, policy and escalation

Relationship	Signal or exchange	Purpose and expected response
S4 and wider environment	Trends, new needs, threats and possibilities	Revise assumptions and develop options.
S3 and S4	Present constraints and future proposals	Test feasibility and choose adaptation commitments.
S4 and S5; S3 and S5	Policy questions and unresolved tradeoffs	Maintain identity and resolve fundamental tensions.
Algedonic route	Exceptional condition with threshold and evidence	Obtain timely attention beyond the routine path.
R0 with R+1 and R-1	Policy, commitments, capability and exceptions	Maintain coherent autonomy across recursion levels.

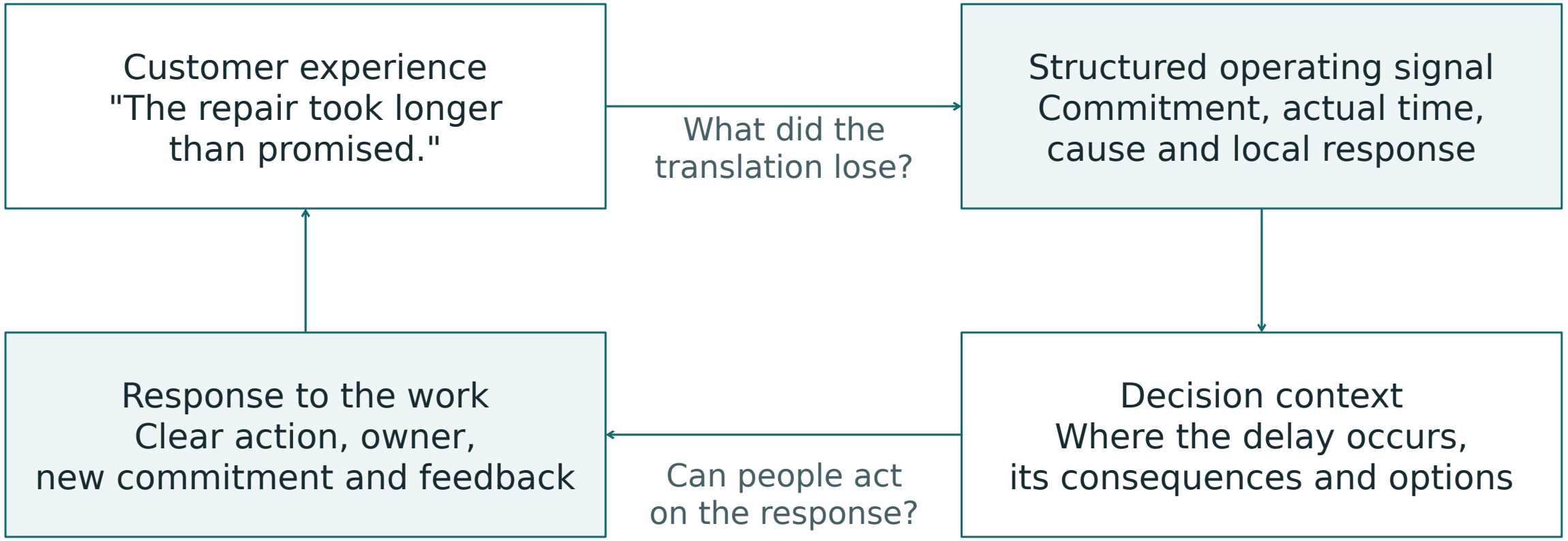
The endpoints are functional roles. They can span several people and mechanisms.

Channel specification template

Field	Specification
Purpose and endpoints	Decision or action supported; sender; recipient; backup.
Content and translation	Minimum signal; definition; units; context; who checks interpretation.
Timing and capacity	Cadence or trigger; maximum useful delay; expected volume and peak load.
Response and authority	Required acknowledgement; decision owner; permitted action; closure.
Reliability and access	Access rules; delivery checks; fallback route; retained evidence.
Test and owner	Named channel owner; simulation or observed test; review date.

Record one channel per specification. Split channels when their purpose, recipient or timing differs materially.

Transducers preserve meaning between roles



A transducer changes the form of a signal so another role can use it. Test what meaning the translation preserves, omits or distorts.

A channel test uses a concrete event

Run a tabletop exercise or trace an actual event through the proposed channels.

Test question	Observation to record
Did someone notice the event?	Source, detection time and missing information.
Did the intended person receive it?	Route, delivery time, backup and access failure.
Did they understand the significance?	Interpretation, questions and translation errors.
Could they act in time?	Authority, resources and decision delay.
Did the originator learn the result?	Acknowledgement, action, closure and learning.

Test routine demand, a burst of exceptions and a recipient's absence. Repair the channel before relying on it.

Step VII: representation

Represent the design

- Show the operational units and relevant recursion levels.
- Name the roles or bodies that fulfil each regulatory function.
- Make essential communication and escalation relationships visible.

Make it usable

- Connect the map to SCT records and role mandates.
- Document responsibility, accountability and approval authority.
- Describe meetings by the decisions or coordination they support.
- Check whether a new participant can follow a real issue through the design.

A conventional reporting chart may remain useful. The VSM representation adds the regulatory relationships needed to understand the organisation.

RASIC legend and working conventions

Code	Meaning in this reference	Working convention
R	Responsible for delivery and coordination	One or more roles may contribute to delivery.
A	Accountable for the outcome	One clear A per active task is this template's convention.
S	Supports delivery	Specify the contribution when it is material.
I	Informed	Specify what is communicated and when.
C	Consulted before the relevant decision	Give the consultation a clear question and deadline.

Approval authority is a separate field. Blank means unassigned or unreviewed. A dash means reviewed with no involvement. These conventions are not VSM laws.

RASIC example: a shared specialist service

Fictional example using the legend on slide 46. R/A combines delivery and outcome accountability.

Continuing task	Hub lead	Service coordinator	Operations lead	Policy body
Maintain hub requests and forecasts	R/A	C	I	-
Coordinate specialist assignments	C	R/A	I	-
Maintain the shared capacity agreement	C	R	A	I
Maintain policy for service eligibility	C	C	R	A

Record approval authority and acceptance criteria separately for each task. A RASIC entry does not itself grant a legal or financial permission.

Role mandate template

Field	Mandate
Purpose and scope	Role name; recursion level; VSM contributions; continuing outcomes.
Tasks and authority	SCTs; permitted decisions; budget or resource boundaries; approval authority.
Relationships	Required inputs; outputs; counterpart roles; support and escalation routes.
Capacity and continuity	Expected demand; time; skills; tools; deputy or absence cover.
Accountability and review	Evidence of results; acceptance criteria; review owner and review date.

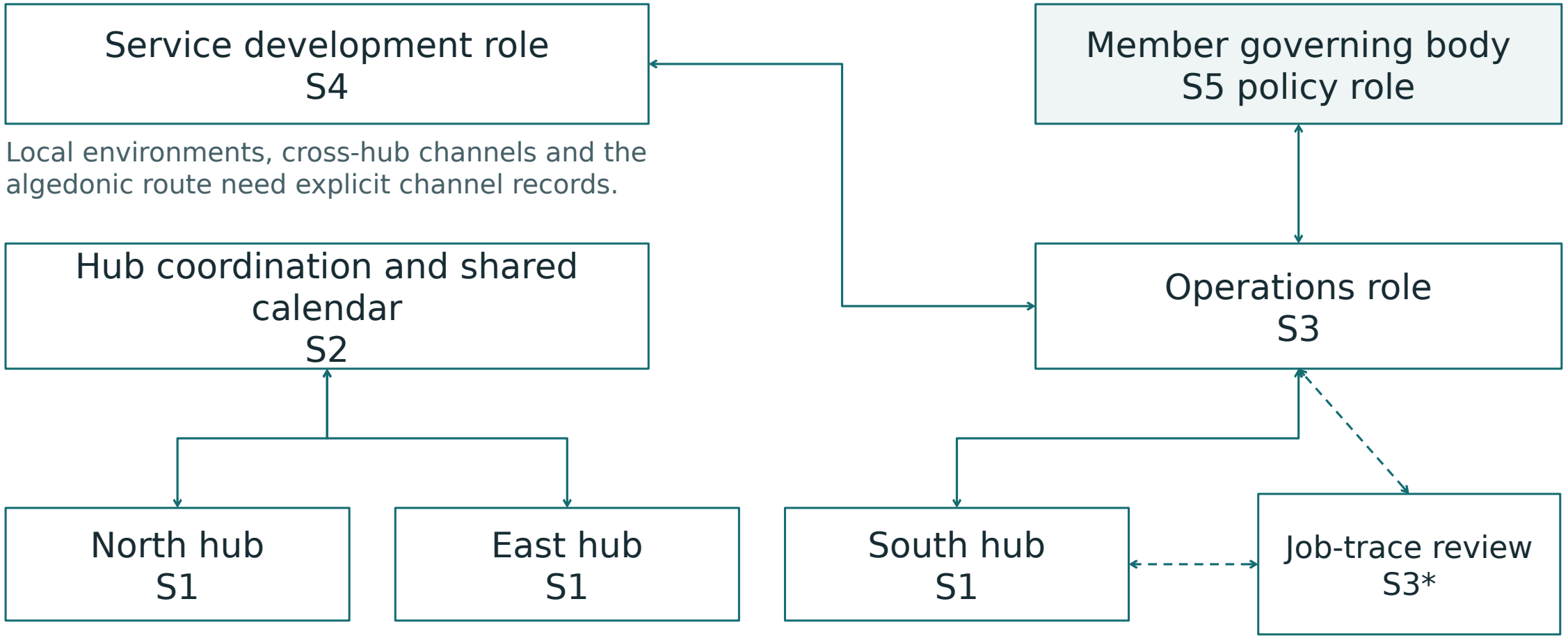
A person may hold several roles. Make conflicts of interest, workload and assurance independence explicit where relevant.

Meeting mandate template

Field	Mandate
Purpose and function	The recurring decision, coordination or inquiry; relevant SCTs and VSM functions.
Participants and authority	Convenor; required roles; who decides; approval limits; deputies.
Inputs and cadence	Required evidence; submission timing; cadence or event trigger.
Outputs and follow-through	Decision record; action owners; recipients; deadlines and closure.
Escalation and review	Unresolved issue route; cancellation rule; evidence that the meeting earns its time.

A useful meeting mandate explains what work becomes possible because the meeting exists.

A viable organisation representation



Fictional example. The map describes functional contributions. Role mandates and channel records contain the actual authority and timing.

Worked case: a repair cooperative

Assumed setting

- A member-owned cooperative helps households repair useful goods.
- Three district hubs serve different local demand patterns.
- The hubs share specialist capacity, supplier arrangements and a booking service.

Assumed concerns

- Customers receive promises that exceed available specialist capacity.
- The same exceptions travel through several meetings.
- Future services compete with urgent operating demands.
- Staff are uncertain about which decisions belong locally.

All organisations, events and design choices in this case are invented for learning. No real business data is represented.

Case, Step I: a coherent unit boundary

Candidate segmentation	Strength in this scenario	Question or drawback
District hubs	Local knowledge and responsibility for the complete repair outcome.	How will hubs share scarce specialists?
Product categories	Concentrates technical knowledge and equipment.	Will customers face handovers across categories?
Process stages	Allows specialist scheduling of intake, repair and return.	Who would own the complete customer outcome?

Candidate choice: district hubs. The cooperative would test this assumption using demand patterns, handovers and resource dependencies.

Case, Steps II-III: capacity and continuing tasks

Assumed pressure	Proposed SCT	Evidence to examine
Unreliable specialist promises	Maintain a shared view of specialist demand and capacity.	Unmet promises; waiting time; rework
Repeated resource conflicts	Coordinate assignments using an agreed priority rule.	Unresolved conflicts; decision delay
Local decisions wait centrally	Maintain clear hub authority and an exception route.	Approval waits; avoidable escalations
Future work loses attention	Develop and test options for changing customer needs.	Learning questions; experiments; decisions

The SCTs address ongoing organisational work. A one-time software installation would only implement part of a mechanism.

Case, Step IV: a proposed allocation

Work	Hub level, R-1	Cooperative level, R0
Customer commitment	Promise within visible local and shared capacity.	Maintain shared definitions and escalation conditions.
Specialist service	Forecast needs and adapt routine schedules.	Maintain the shared service and priority mechanism.
Service improvement	Run small changes within local authority.	Support changes that span hubs or exceed local capacity.
Purpose and policy	Apply policy and surface conflicts.	Maintain the common purpose and policy decisions.

This allocation is a proposal for testing. The detailed agreement must specify authority, resources and response times.

Case, Step V: functions and mechanisms

VSM	Proposed mechanism	Intended contribution
S2	Shared capacity calendar and hub coordination	Resolve ordinary scheduling interference.
S3	Operations role with hub resource reviews	Maintain current capability and commitments.
S3*	Periodic trace of selected repair jobs	Check promises and actual experience directly.
S4	Customer inquiry and service experiments	Develop feasible responses to changing needs.
S5	Member governing body with a policy mandate	Maintain purpose and settle policy tradeoffs.

Named roles would need time, skills, authority and clear handoffs. The table alone would not create these functions.

Case, Step VI: a capacity exception channel

Element	Candidate agreement
Trigger	A hub cannot fulfil a customer commitment within the agreed service conditions.
Signal	Affected commitment, latest safe decision time, cause and feasible local alternatives.
Recipient	Service coordinator first; operations role if the issue exceeds the coordination mandate.
Response	Acknowledge within the locally agreed interval and assign one decision owner.
Closure	Confirm the revised commitment with the hub and customer, then update the capacity record.

A serious exceptional condition follows the separately defined algedonic route. Routine capacity problems use the normal channel.

Case, Step VII: representation and a first pilot

Representation

- A map shows the hubs, the whole's functions and escalation routes.
- Role records state local authority and shared commitments.
- The RASIC matrix links each SCT to outcome accountability.
- Channel records identify signals, timing and response.

Pilot

- Test one shared specialist service across two hubs.
- Trace real commitments and a simulated absence of the coordinator.
- Review customer experience and the burden on staff.
- Revise the agreement before extending it to the third hub.

The scenario demonstrates a way to reason with the method. It provides no observed outcome or claimed improvement percentage.

Implementation through tested agreements

Stage	Work	Decision evidence
Prepare	Confirm scope, sponsor, participants and baseline observations.	A shared problem statement and accessible evidence
Design	Complete the relevant steps and make authority explicit.	A coherent candidate design with open assumptions
Pilot	Try a bounded arrangement with support and a fallback.	Observed effects, unresolved exceptions and staff experience
Review	Compare intended effects with what happened.	Reasons to adopt, revise or stop the arrangement
Extend	Update roles, tools, agreements and training.	Capacity to operate the design beyond the pilot

Implementation changes how decisions and communication work. A new diagram or meeting calendar is only part of that change.

Pilot charter template

Field	Charter prompt
Problem and hypothesis	What observed problem should the proposed arrangement change, and why?
Scope and authority	Which units, task parts and decisions are included? Who can approve changes?
Resources and safeguards	Who provides time and support? What must stay within acceptable bounds?
Evidence and review	What baseline and observations will inform the review? When will it occur?
Decision and fallback	Who chooses adoption, revision or stopping? How can work continue if the pilot fails?

Choose a bounded pilot large enough to test the relevant dependencies and small enough to change responsibly.

Evidence for an operating review

What to observe	Possible evidence	Interpretation question
Purpose and outcomes	Recipient experience and fulfilled commitments	Are the outcomes meaningful to those served?
Response capability	Decision delay and unresolved exceptions	Can the appropriate level respond in time?
Coordination	Repeated conflicts and handover rework	Which dependencies still lack a mechanism?
Adaptation	Experiments, revised assumptions and decisions	Does learning change choices or resource commitments?
Policy and trust	Unresolved policy conflicts and staff accounts	Do boundaries remain clear and credible?

Use multiple kinds of evidence and retain context. A single aggregate score can conceal the mechanism that needs attention.

A concise diagnostic check

Area	Question for evidence
S1	Can units meet their purpose with the authority, resources and feedback available?
S2	Can units resolve recurring interference without unnecessary intervention?
S3	Do resource agreements and operating decisions maintain the whole's capability?
S3*	Does direct observation reveal reality that routine reports can miss?
S4	Do environmental inquiry and options lead to adaptation decisions?
S5	Does policy give clear direction and resolve fundamental tensions?
Algedonic and recursion	Can exceptions reach an effective response, including across recursion levels?

For each answer, record the evidence, confidence, consequence and next inquiry. Avoid treating a yes/no response as a diagnosis.

Common design failures and useful inquiries

Pattern	Why it matters	Next inquiry
Authority without resources	A unit cannot meet the outcome it owns.	Which commitment exceeds its actual capability?
Coordination by repeated escalation	The centre absorbs routine local conflict.	Which dependency needs a peer mechanism or rule?
S3 overwhelms S4	Urgent work crowds out adaptation.	What protects inquiry and future commitments?
S3* becomes another boss	Assurance undermines the normal management agreement.	Where should checking end and decision authority begin?
A policy nobody can use	People cannot resolve real tradeoffs consistently.	Which recent decision exposed an unclear boundary?

Patterns are hypotheses to investigate. Confirm them with affected people and direct evidence.

A workshop sequence that produces decisions

Session	Participants and work	Reviewable output
Scope and evidence	People responsible for purpose plus people close to operations.	Boundary statement and an evidence plan
Units and manageability	Operational representatives and shared-service counterparts.	Segmentation choice and capability questions
Tasks and allocation	People who perform, receive and authorise the work.	SCT inventory and allocation agreements
Functions and channels	Owners of decisions, coordination, assurance and adaptation.	Mandates and tested channel specifications
Representation and pilot	Affected participants plus the sponsor for the change.	Usable map, role records and a pilot charter

Set duration to the complexity of the issue and the evidence available. Keep unresolved disagreements visible.

Glossary

Term	Meaning in this reference
System in focus (R0)	The organisational whole selected for this inquiry.
Recursion	Viable systems nested within viable systems.
Variety	Distinguishable states or situations relevant to regulation.
SCT	A continuing success-critical task that supports the system's purpose and viability.
Transducer	A mechanism that translates signals into a form another role can interpret and use.
Algedonic channel	An exceptional signal route that can reach a higher level able to respond.
RASIC	Responsible, Accountable, Support, Informed and Consulted. See the explicit conventions on slide 46.

Terminology differs between authors and applications. State local conventions wherever a term affects a decision.

Intellectual sources and attribution

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W. Ross Ashby

An Introduction to Cybernetics. Chapman & Hall, 1956.

Variety, requisite variety and regulation.

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The seven-step application sequence. Step III appears as Mission-Critical Tasks in the English edition.

This reference contains newly written explanations, diagrams, templates and a fictional case. It does not reproduce pages, diagrams or artwork from these publications.

Reference and template index

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