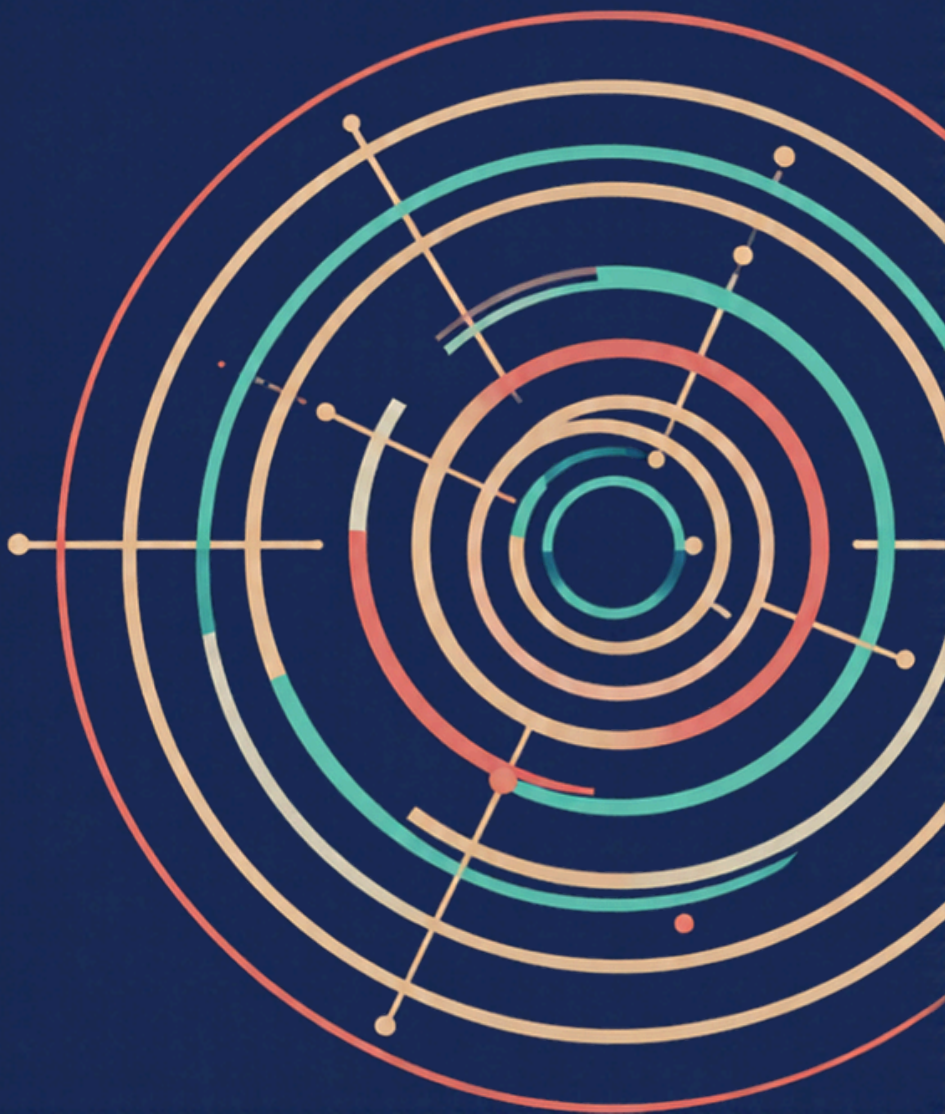
Section 03

Economic model of shared service



Economic Model for Shared Operational Infrastructure

IT, cybersecurity, CRM/data infrastructure, finance administration, HR administration, reporting and software procurement

Purpose
To test whether shared operational infrastructure can reduce duplicated fixed costs, release staff and volunteer capacity, improve access to specialist capability, and strengthen organisational resilience across small patient organisations.

Working model for the Amplify Impact collaboration: Designed for cross-country application, beginning with country-specific benchmarking and a 10-organisation cohort.

1. Economic model objective

The economic model should answer a narrower question than the broader evidence review:

Core question
What does it currently cost small patient organisations to provide seven repeatable operational functions independently, what would comparable shared provision cost, and how much financial and organisational capacity could consequently be released?

The seven functions are IT, cybersecurity, CRM/data infrastructure, finance administration, HR administration, reporting, and software procurement.

At this stage, the model should be treated as a transparent decision model rather than as a claim of demonstrated savings. The evidence base establishes recurring structural constraints, but patient-organisation-specific expenditure data are not yet sufficient to justify a single savings percentage. Assumptions should therefore be explicit and tested through ranges and sensitivity analysis.

2. Unit of analysis

Level	Unit of analysis	Purpose
Organisation	One small patient organisation	Establish current operating cost, capacity burden and potential saving.
Country cohort	10 representative organisations	Test economies of scale within a national shared-service hub.
Global network	60 organisations across six countries	Test scale effects and globally shareable infrastructure.

The 10-organisation cohort is the primary demonstration unit. It is large enough to test shared fixed-cost dilution while remaining intuitive for country-level analysis.

3. What counts as cost?

The model should use full economic cost, not simply invoices paid. For each function, current economic cost should include direct expenditure, paid staff time, volunteer time, duplication/rework, and avoidable external professional costs.

Key principle
A system that costs little in cash can still impose a substantial organisational burden. Volunteer or executive time spent on bookkeeping, troubleshooting, reconciliation, reporting or data cleaning is not economically free.

3.1 Parallel cost measures

Measure	Definition
Financial cost	Actual cash expenditure.
Organisational resource cost	Cash expenditure plus the economic value of paid and volunteer time.

The two measures should be reported separately. This prevents the model from overstating cash savings while still capturing the real resource burden.

4. Core economic equations

For organisation i and function j, current annual cost is:

$$C_{ij} = D_{ij} + (H_{ij} \times W_i) + E_{ij}$$

Term	Meaning
D	Direct expenditure on systems/providers.
H	Internal administrative hours.
W	Appropriate hourly labour value.
E	Additional external/professional expenditure.

Shared provision becomes:

$$S_{ij} = F_j / N + V_{ij} + L_{ij}$$

Term	Meaning
F	Shared fixed infrastructure cost.
N	Number of participating organisations.
V	Variable cost attributable to the organisation.
L	Residual local cost.

Gross economic saving and percentage efficiency gain are:

$$G_i = \Sigma C_{ij} - \Sigma S_{ij}$$

$$EG_i = (G_i / \Sigma C_{ij}) \times 100$$

Financial savings and released staff/volunteer hours should nevertheless remain separate headline outputs.

5. Baseline organisation archetypes

Variable	Micro	Small	Established small
Paid FTE	0–1	1–3	3–7
Volunteer dependence	Very high	High	Moderate
CRM maturity	Spreadsheet/basic	Basic CRM/mixed	CRM but fragmented
IT support	Ad hoc	Ad hoc/external	External/provider

Variable	Micro	Small	Established small
Finance	Treasurer/basic bookkeeping	Bookkeeper	Bookkeeper/accountant
HR	Informal	Basic	More formal
Reporting burden	Moderate	High	High
Digital complexity	Low–moderate	Moderate	Moderate–high

Using archetypes avoids assuming that a volunteer-run organisation currently purchases the same level of service as an organisation employing several people.

6. IT infrastructure and support

Current-state cost base

Include software configuration, cloud storage, email administration, device support, website technical maintenance, troubleshooting, backup, account administration, consultants, and staff/volunteer troubleshooting time.

Shared-service model

A common platform could provide Microsoft/Google environment configuration, account provisioning, a shared helpdesk, device and security standards, backup, cloud architecture, standard integrations, website technical support and user training.

Economic mechanism

The principal saving is not necessarily cheaper software. It is one technical capability supporting many organisations instead of each organisation independently sourcing, learning and troubleshooting systems.

Quantifiable outputs

- Annual external IT expenditure
- Internal IT-support hours
- Number of systems
- Cost per user
- Support cost per organisation
- Shared cost per organisation
- Hours released

Modelling confidence: High.

7. Cybersecurity

Current-state cost base

Include security software, multi-factor authentication, backup, security policies, staff training, incident-response capability, privacy/security expertise and access management.

Shared-service model

Shared provision should establish an agreed minimum security standard and provide the technical controls, training and specialist support needed to reach it.

Economic mechanism

Cybersecurity must be modelled as both an efficiency question and a capability/risk question. An organisation that currently spends nothing may be under-protected rather than efficient.

Quantifiable outputs

- Cost of individually achieving the minimum standard
- Cost of achieving the standard collectively
- Number/proportion gaining the minimum standard
- Operational cost difference
- Qualitative risk reduction

Modelling confidence: High for operating costs; low–moderate for avoided-loss estimates.

8. CRM and data infrastructure

Current-state cost base

Include CRM subscriptions, spreadsheets, mailing-list systems, survey systems, donor and volunteer databases, manual transfer between systems, duplicate data entry, list cleaning, reporting, data reconciliation and consultant support.

Shared-service model

Use common technology and architecture with separate organisational datasets, role-based permissions and local relationship ownership. Components may include standard fields, integrations, automated reporting, email integration, donor/volunteer modules, dashboards, data-quality tools and privacy controls.

Economic mechanism

Separate licence savings, administration savings and integration/automation savings from data-quality improvement. The first three can be monetised; data quality should initially be a capability outcome.

Quantifiable outputs

- Licence savings
- Administration hours released
- Integration/automation savings
- Data-quality capability uplift

Modelling confidence: Moderate.

9. Finance administration

Current-state cost base

Include bookkeeping, accounting software, payroll, reconciliations, invoicing, expense management, budgeting, financial reporting, accountant fees, and treasurer/CEO administrative time.

Shared-service model

A national finance service could provide a common accounting platform, bookkeeping, payroll administration, accounts payable/receivable, standard financial dashboards, grant/project coding and year-end preparation. Boards retain fiduciary responsibility.

Economic mechanism

Finance administration combines high repetition, relatively standard processes, specialist skill requirements and low relational dependence, making it particularly suitable for scale economies.

Quantifiable outputs

- Cost per organisation
- Cost per transaction
- Executive/treasurer hours released
- External accounting costs
- Total cohort savings

Modelling confidence: Very high.

10. HR administration

Current-state cost base

Include contracts, payroll administration, personnel records, policies, onboarding, leave administration, volunteer onboarding, screening/checks, training administration, recruitment administration and external HR advice.

Shared-service model

Shared provision could include a common HR platform, templates, onboarding workflows, personnel files, standard training, a policy library, HR advice and volunteer administration. Employment relationships and management remain local.

Economic mechanism

Absolute HR savings may be modest where organisations employ few people, but cost per employee can be high because fixed administrative requirements are spread across very small workforces.

Quantifiable outputs

- Cost per employee/volunteer administered
- Administrative hours released
- External HR spend
- Shared platform/service cost

Modelling confidence: High.

11. Reporting

Current-state cost base

Include data extraction, spreadsheet manipulation, repeated collection of the same information, grant acquittals, annual reports, regulatory submissions, board reporting, impact reporting and funder reporting.

Shared-service model

A common reporting architecture should allow information to be entered once and reused across financial, stakeholder, governance and impact reporting workflows.

Economic mechanism

The objective is not less accountability, but less repetitive administration required to demonstrate accountability.

Quantifiable outputs

- Number of reports per year
- Hours per report
- Labour cost per report
- Proportion reusable/automatable
- Annual hours released

Modelling confidence: High for time burden; moderate for achievable reduction.

12. Software procurement

Current-state cost base

Inventory CRM, email, accounting, payroll, survey tools, cloud storage, cybersecurity, design software, project management, website tools, video conferencing, volunteer systems and data analytics.

Shared-service model

Compare individual retail/nonprofit procurement with central negotiated procurement and a rationalised application architecture.

Economic mechanism

The larger opportunity may be application rationalisation rather than volume discounts alone. Procurement saving equals negotiated discount plus avoided duplicate software plus avoided procurement/administration time.

Quantifiable outputs

- Licences × users
- Current annual software spend
- Shared/rationalised spend
- Duplicate applications removed
- Procurement hours avoided

Modelling confidence: Very high once software inventories are available.

13. Base economic model for a 10-organisation cohort

The following structure should form the core calculation engine. It should be populated first with benchmark assumptions and subsequently validated against a small number of organisations.

Function	Cash cost	Internal hours	Value of time	Full current cost	Shared fixed	Shared variable	Residual local	New full cost	Cash saving	Hours released
IT	A	A	A	A	A	A	A	A	A	A
Cybersecurity	A	A	A	A	A	A	A	A	A	A
CRM/data	A	A	A	A	A	A	A	A	A	A
Finance	A	A	A	A	A	A	A	A	A	A
HR	A	A	A	A	A	A	A	A	A	A
Reporting	A	A	A	A	A	A	A	A	A	A
Software	A	A	A	A	A	A	A	A	A	A
TOTAL	Σ	Σ	Σ	Σ	Σ	Σ	Σ	Σ	Σ	Σ

14. Scenario design

Scenario	Definition
Conservative	Only very high-confidence functions are shared; modest administrative-time reductions; limited procurement savings; substantial residual local administration retained.
Central	Realistic implementation of the hybrid model identified through the evidence review.
High-efficiency	High adoption; strong systems integration; greater reporting automation; significant reduction in duplicate platforms and external services.

All three scenarios should be presented. The model should not select the most attractive case as the headline result.

15. Critical counterfactual: current spend versus adequate capability

A conventional cost-saving model can misclassify underinvestment as efficiency. For example, if an organisation currently spends nothing on cybersecurity and shared provision costs money, a simple budget comparison records a negative saving even if the organisation previously lacked adequate protection.

Counterfactual	Question answered
A. Current practice	What does the organisation currently spend? This estimates actual budget impact.
B. Equivalent capability	What would it cost the organisation independently to achieve the same service/capability standard? This estimates the economic value of collective provision.

Required interpretation
The model should report both counterfactuals. This distinguishes genuine cost savings from the value of providing previously unaffordable or unavailable capability.

16. Four categories of economic benefit

Benefit	Meaning
Cash saving	Reduction in actual expenditure.
Capacity release	Paid/volunteer hours no longer required for repetitive administration.
Capability uplift	Access to services previously unaffordable or unavailable.
Risk reduction	Improved cyber, compliance, data and continuity controls.

This is particularly important for micro-organisations, where shared provision may generate limited cash savings but substantial capability uplift.

17. Scale curve

The model should explicitly test 5, 10, 20, 50 and 100 participating organisations.

$$AC_n = F / N + V$$

This identifies the minimum viable scale for each shared function. The analysis should test, rather than assume, whether different services reach economic viability at different cohort sizes.

18. Cross-country architecture

The model should distinguish global fixed costs from national fixed costs and organisation-specific residual costs.

Layer	Potential components
Global	CRM technology; cloud infrastructure; cybersecurity technology; common data architecture; knowledge-management platform; software procurement framework; training infrastructure.
National	Finance; payroll; HR compliance; accounting configuration; privacy interpretation; charity regulation; tax; regulatory reporting.
Organisation	Local administration and relationship-based functions that cannot or should not be removed.

$$SC_i = G / N^G + C_C / N_C + V_i + L_i$$

Term	Meaning
G	Global fixed costs.
N^G	Total participating organisations.
C_C	Country fixed cost.
N_C	Organisations participating in that country.
V_i	Variable organisation-specific costs.
L_i	Residual local costs.

This creates a genuine cross-country economic architecture rather than multiplying an Australian model across jurisdictions.

19. Economic outcomes to report

Financial: Annual current cash expenditure; annual shared-service expenditure; net annual cash saving; percentage saving; implementation cost; transition cost; break-even point; three-year net benefit; five-year net benefit.

Capacity: Paid administrative hours released; volunteer administrative hours released; executive/CEO hours released; FTE-equivalent capacity released.

Capability: Number of organisations gaining professional IT support; cybersecurity baseline; functioning CRM; professional bookkeeping; HR infrastructure; integrated reporting; data capability.

Efficiency: Cost per organisation; cost per employee; cost per CRM user; cost per transaction; cost per report; cost per administrative hour released.

20. What can be populated now versus what still needs validation?

Data category	Likely source
Can be populated without approaching patient groups	Labour rates; accounting/bookkeeping/HR/IT support rates; software and CRM pricing; cyber and cloud costs; payroll costs; implementation costs; market-rate consultant costs; regulatory requirements; standard charity reporting requirements.

Data category	Likely source
Can be estimated from secondary evidence	Ranges for administrative burden; digital capability; workforce size; volunteer dependence; indirect-cost pressure; reporting burden.
May eventually require limited organisational validation	Actual software currently used; approximate external administrative expenditure; approximate internal hours spent by function.

A one-page cost-validation sheet can be used only after the benchmark model has been built, minimising demands on already stretched patient organisations.

21. Proposed minimum dataset

Variable	Source
Country	Existing analysis
Organisation size	Existing/public data
Employees	Public/secondary where available
Volunteers	Public/secondary where available
Revenue	Public filings where available
Current software	Desk audit where visible
IT market cost	External benchmark
Cyber market cost	External benchmark
CRM market cost	External benchmark
Finance market cost	External benchmark
HR market cost	External benchmark
Labour value	National benchmark
Reporting requirements	Regulatory/funder evidence
Estimated admin hours	Literature/scenario
Shared-service cost	Bottom-up model
Implementation cost	Supplier/market benchmark

22. Sensitivity analysis

Parameter	Low	Central	High
Administrative hours	−25%	Base	+25%
Labour value	Lower benchmark	Median	Higher benchmark
Shared staffing cost	−15%	Base	+15%
Implementation cost	−20%	Base	+30%

Parameter	Low	Central	High
Software saving	5%	15%	30%
Time reduction	10%	30%	50%
Adoption	50%	75%	100%

These percentages illustrate the structure only. They should be replaced with evidence-based ranges during model construction.

Preferred policy conclusion
Rather than claiming a single savings percentage, report the range over which the model remains economically favourable, the cohort size at which it breaks even, and the functions driving the result.

23. Break-even analysis

$$N^* = F / (C - V)$$

Where F is shared fixed cost, C is average independent cost per organisation, and V is variable shared cost per organisation. This should be calculated separately for each of the seven functions.

24. Avoided Duplication Index (ADI)

The Avoided Duplication Index provides a structural measure that is independent of wage rates and exchange rates, making it useful for cross-country comparison.

$$ADI_j = 1 - (\text{shared instances required} / \text{current independent instances})$$

If ten organisations currently maintain ten independent technical-support arrangements and the shared model requires one, ADI = 90%. This does not mean costs fall by 90%; it means 90% of duplicated infrastructure instances have been eliminated.

25. Released Organisational Capacity (ROC)

$$ROC = \Sigma(H_{current} - H_{shared})$$

Report ROC as hours per year and convert it to FTE-equivalent capacity where appropriate:

$$\text{FTE released} = ROC / \text{annual productive hours}$$

Interpretation safeguard
Released organisational capacity represents resources available for redeployment according to organisational priorities. It should not automatically be interpreted as additional patient-contact time.

26. Hypotheses to test

- H1. Providing seven common operational functions independently creates duplicated fixed costs across small patient organisations.
- H2. Shared provision reduces average cost as the number of participating organisations increases.
- H3. Some of the largest benefits arise through released staff and volunteer capacity rather than direct cash savings.
- H4. Shared infrastructure enables small organisations to access capabilities they could not economically maintain independently.
- H5. The optimal model is hybrid: global technology infrastructure, nationally configured professional services and locally controlled relational functions.

27. Headline outputs for the final analysis

- For every $1 invested in shared infrastructure, $X in financial and organisational resource value is generated.
- A cohort of 10 organisations releases approximately X–Y administrative hours annually.
- The model reaches break-even at approximately N participating organisations.
- At 50 organisations, average infrastructure cost per organisation falls by X%.
- X% of benefits arise from cash savings and Y% from released organisational capacity.
- X organisations gain access to capabilities they could not reasonably maintain independently.

These figures should not be inserted until the bottom-up costing and sensitivity analysis have been completed.

28. Next stage

1. Build country-specific market-cost benchmarks for Australia, the United States, the United Kingdom, India, Brazil and South Africa for the seven functions.
2. Build the bottom-up shared-service architecture and calculate global fixed, national fixed and organisation-variable costs.
3. Populate micro, small and established-small archetypes.
4. Model cohorts of 5, 10, 20, 50 and 100 organisations.
5. Run conservative, central and high-efficiency scenarios.
6. Calculate cash savings, released organisational capacity, capability uplift, ADI, break-even and three- and five-year ROI.

29. Alignment with the existing evidence base

This model is designed to sit alongside the existing CCDR review. That review frames small patient organisations as structurally constrained but systemically important, and identifies finance, IT, HR, CRM and communications as core domains of operational inefficiency. It also argues that shared services may reduce duplicated effort, fragmented systems and limited internal capacity without compromising mission-specific activities.

The model extends that framing by concentrating initially on the operational functions that are most amenable to standardisation, shared specialist capability, common infrastructure and economies of scale.

30. Model governance and interpretation

- Do not treat low current expenditure as evidence of adequate capability.
- Keep cash savings separate from the economic value of released staff and volunteer time.
- Do not monetise risk reduction aggressively where evidence is weak.
- Preserve local ownership of patient relationships, advocacy priorities and mission-specific functions.
- Make every major assumption visible and test it through sensitivity analysis.
- Use organisational validation selectively, after secondary evidence and market benchmarks have been exhausted.