

CHAPTER 15

Migration Strategy and the Seven Rs

“A migration programme succeeds when every workload has a business reason, an accountable owner, a safe path, and a measurable outcome.”

— Sazzad Khan

EXECUTIVE SUMMARY

Migration is not the act of copying infrastructure from one location to another. It is a portfolio transformation that converts business strategy into thousands of coordinated decisions about applications, data, dependencies, risk, cost, timing, and ownership.

For Nordic Ventures Group, the challenge is considerable. Twelve legacy datacentres support operations in fourteen countries and five factories. The estate includes SAP, Microsoft Dynamics 365 integrations, manufacturing systems, shared infrastructure, regional applications, identity dependencies, databases, file services, and systems acquired through earlier business expansion. Migrating this estate without rationalisation would move fragmentation into Azure and preserve the cost and risk NVG is trying to remove.

This chapter establishes a migration strategy based on discovery, workload assessment, the Seven Rs, migration waves, landing-zone readiness, structured cutover, and post-migration value realisation. It treats Retain as a deliberate governed disposition when migration is not currently justified, while the Seven Rs define the principal transformation actions: Rehost, Replatform, Refactor, Rearchitect, Rebuild, Replace, and Retire.

WHY ENTERPRISE MIGRATIONS FAIL

Large migrations rarely fail because a virtual machine cannot be moved. They fail because the organisation underestimated dependencies, moved applications without business ownership, treated landing-zone readiness as a technical afterthought, or measured success by server count rather than business outcomes. A migration programme can appear technically successful while creating higher operating cost, weaker service ownership, and new security exposure. Moving an oversized server into an oversized Azure virtual machine is migration activity, but it is not transformation. The Trusted Advisor must therefore protect the programme from both uncontrolled urgency and endless analysis.

Failure Pattern	Consequence	Trusted Advisor Response
Incomplete discovery	Hidden dependencies cause outages during cutover	Establish continuous inventory and dependency analysis
No workload owner	Decisions stall and risk cannot be accepted	Assign accountable business and technical owners
One strategy for every workload	Overengineering or missed modernisation value	Apply workload-specific disposition decisions
Landing zone not ready	Security and governance are added after migration	Use platform readiness as an entry criterion
Big-bang migration	Risk and operational pressure concentrate in one event	Use pilots and migration waves

Failure Pattern	Consequence	Trusted Advisor Response
Success measured by moved servers	Cost and business outcomes remain unmeasured	Measure service, risk, cost and business value

unclear modernisation outcomes

THE NORDIC VENTURES GROUP MIGRATION CHALLENGE

NVG must reduce the number of datacentres, improve resilience, standardise security, and lower operational cost without interrupting production. The migration programme must also distinguish between workloads that should move quickly and workloads that require modernisation, replacement, or retirement.

The portfolio contains several different migration realities. Some virtual machines are technically simple but have undocumented business dependencies. Some applications are business-critical but run on unsupported operating systems. Some regional solutions duplicate functionality already available in Microsoft 365, Dynamics 365, or approved SaaS platforms. Manufacturing workloads require coordinated factory windows, local fallback procedures, and careful latency analysis. SAP requires its own validated architecture, operational model, and transition plan.

The migration strategy must therefore be organised around business services and dependency groups rather than around isolated servers.

MIGRATION PRINCIPLES

- Business outcomes determine migration priority.
- Discovery precedes disposition; assumptions are recorded as risks.
- Dependent components move together or have an explicit interim integration design.

- The Azure landing zone is prepared before production workloads arrive.
- Security, management, backup, monitoring, and cost ownership are part of migration definition of done.
- Every cutover includes validation, rollback criteria, communication, and business acceptance.
- Migration creates a modernisation backlog rather than pretending that all debt can be resolved at once.
- No datacentre is closed until residual dependencies and recovery obligations are verified.

DISCOVERING THE DIGITAL ESTATE

A credible migration plan begins with a credible inventory. NVG combines automated discovery with business interviews, configuration data, financial records, licensing information, and service-management data. Azure Migrate can provide a centralised hub for discovery, assessment, dependency analysis, and migration planning, but automated telemetry must be enriched with business context.

The result is a living digital-estate register rather than a static spreadsheet. Each record must identify what the asset is, who owns it, which business capability it supports, how critical it is, what it depends on, how it is protected, and what decision has been made about its future.

Assessment Dimension	Key Questions
Business	Which capability and process does the workload support? Who owns the outcome?
Technical	What are the components, versions, performance profile, and dependencies?

Assessment Dimension	Key Questions
Security	What data is processed? Which identities and privileges are required? What controls apply?
Operational	How is the workload monitored, patched, backed up, supported, and recovered?
Financial	What are current run costs, licences, contracts, and expected cloud costs?
Regulatory	Are there data residency, retention, audit, or industry requirements?
Change	What releases, projects, acquisitions, or business deadlines affect the migration window?

APPLICATION DEPENDENCY MAPPING

Dependency analysis converts infrastructure inventory into migration groups. Network communication data helps identify systems that exchange traffic, but it does not explain every dependency. Certificates, service accounts, file transfers, scheduled jobs, DNS records, identity providers, shared databases, external APIs, and manual business processes must also be mapped.

NVG treats a migration unit as the smallest group that can move without breaking a business service. This often includes application servers, databases, integration components, identity dependencies, monitoring, and connectivity. Where a dependency cannot move in the same wave, the architecture must define how the hybrid dependency will operate and how long the interim state is permitted to exist.

THE SEVEN RS

Rationalisation taxonomies vary across frameworks and organisations. Microsoft guidance commonly uses five or six Rs in specific assessment and modernisation contexts. NVG uses a Seven Rs model to create a complete enterprise decision vocabulary. Retain remains available as a governed portfolio disposition when a workload cannot yet be changed, but it is not counted as a migration action because the workload does not move.

The objective is not to apply the most ambitious R. The objective is to select the disposition that produces the best balance of business value, risk, speed, cost, and operational sustainability.

Strategy	Definition	Best Fit	Primary Risk
Rehost	Move with minimal application change, commonly to Azure IaaS	Time-sensitive exits and technically compatible workloads	Preserving cost and operational debt
Replatform	Move to a managed platform with limited code or configuration change	Reducing infrastructure management without full redesign	Underestimating compatibility and testing
Refactor	Improve code structure and cloud optimisation while preserving core behaviour	Maintainability, observability, performance, and debt reduction	Scope growth and regression risk
Rearchitect	Redesign the system around new architectural patterns	Scalability, agility, resilience, and domain separation	Complexity and organisational readiness

Strategy	Definition	Best Fit	Primary Risk
Rebuild	Create a new implementation when the legacy design no longer provides value	Strategic capabilities requiring fundamental redesign	Long delivery time and dual-running cost
Replace	Adopt SaaS or a commercial platform instead of migrating the current implementation	Commodity capabilities and duplicated regional systems	Process change, data migration, and vendor dependency
Retire	Decommission a workload and remove its cost and risk	Obsolete, redundant, unused, or superseded systems	Hidden dependencies and retention obligations

REHOST — MOVE FAST, THEN OPTIMISE

Rehosting can accelerate datacentre exit and reduce immediate infrastructure risk. NVG uses it when application change would threaten a fixed deadline, when the system is stable and supported, or when modernisation will occur in a later funded phase. Rehost is never treated as a permanent exemption from optimisation. Every rehosted workload receives a post-migration review date, right-sizing plan, patching model, backup policy, and modernisation decision.

REPLATFORM — REDUCE OPERATIONAL BURDEN

Replatforming moves selected components to managed Azure services with limited application change. Examples may include moving databases to managed offerings, using Azure App Service for compatible web applications, or replacing self-managed integration

components with platform services. The value comes from reducing patching, backup, availability, and operational overhead while avoiding the cost of a full rewrite.

REFACTOR — IMPROVE THE CODE WITHOUT REPLACING THE PRODUCT

Refactoring addresses technical debt, cloud inefficiency, and maintainability while preserving the application's essential behaviour. It can introduce improved configuration management, managed identity, modern telemetry, automated tests, and better deployment pipelines. NVG applies refactoring selectively because code change expands testing and business validation requirements.

REARCHITECT — CHANGE THE SYSTEM SHAPE

Rearchitecture is appropriate when the existing architecture constrains scale, deployment speed, resilience, or business change. It may separate a monolith into bounded services, introduce asynchronous integration, or redesign data ownership. Rearchitecture is a business and operating-model decision, not merely a technology preference. Teams must be able to own, observe, secure, and operate the new architecture.

REBUILD — START AGAIN WITH A CONTROLLED PRODUCT STRATEGY

Rebuilding is justified when the legacy implementation cannot economically support future requirements. NVG treats rebuild as a product initiative with an explicit problem statement, minimum viable scope, data transition plan, coexistence model, and retirement date for the predecessor. A rebuild without retirement authority creates another duplicated platform.

REPLACE — BUY THE CAPABILITY, DO NOT RECREATE IT

Replacement is often the strongest strategy for commodity processes. A SaaS solution may provide better security, support, and release velocity than a bespoke legacy application. Replacement decisions must include process redesign, identity integration, data ownership, contractual exit rights, and a plan for historical records. The software purchase is only one part of the transformation.

RETIRE — REMOVE COST, RISK, AND COMPLEXITY

Retirement produces immediate value when an application is unused, duplicated, unsupported, or superseded. It requires evidence, not assumptions. NVG validates access logs, integrations, business ownership, record-retention obligations, and fallback requirements before shutdown. Retirement is complete only after data, licences, infrastructure, monitoring, support records, and security exceptions have been removed or archived.

RETAIN — A GOVERNED EXCEPTION

Some workloads remain on-premises because of latency, contractual constraints, plant equipment dependencies, regulatory concerns, unsupported architecture, or a pending replacement. Retention is a deliberate time-bound decision with an accountable owner, risk statement, review date, and management model. Azure Arc may support consistent governance and management for retained hybrid resources where appropriate.

SELECTING THE RIGHT STRATEGY

The disposition decision should be transparent and repeatable. NVG uses a weighted decision model rather than allowing the loudest stakeholder or newest technology to determine the outcome. The model considers business differentiation, technical health, cost,

risk, time, dependency complexity, data sensitivity, vendor roadmap, and team capability.

The output is a recommendation and confidence score, not an automatic decision. Low-confidence decisions are validated through deeper assessment or a proof of concept.

Decision Signal	Likely Direction
Low differentiation, mature SaaS available	Replace
Unused or duplicated capability	Retire
Stable application, urgent datacentre exit	Rehost
Supported application, high infrastructure burden	Replatform
Valuable product, maintainability problems	Refactor
Architecture blocks growth or resilience	Rearchitect
Legacy design cannot support future business model	Rebuild
External constraint prevents change now	Retain with review date

BUILDING THE MIGRATION BUSINESS CASE

The migration business case combines current cost, target cost, transition cost, risk reduction, and business enablement. Azure Migrate can support TCO and business-case analysis, but assumptions must be reviewed by finance, platform teams, workload owners, and licensing specialists.

NVG avoids presenting a single savings number as certainty. Instead, the business case records scenarios, confidence levels, excluded costs, and the actions required to realise savings. A lower Azure run rate is not achieved automatically if datacentre contracts, legacy licences, duplicate tools, and retained support teams remain unchanged.

Cost Category	Examples
Current Run Cost	Hardware, facilities, power, network, software, support, labour
Target Run Cost	Azure consumption, reservations or savings plans, licences, operations, support
Transition Cost	Assessment, remediation, migration tooling, dual running, partners, training
Avoided Cost	Hardware refresh, extended support, datacentre renewal, technical debt incidents
Value Enablement	Faster releases, resilience, analytics, acquisition integration, AI readiness

PREPARING THE AZURE LANDING ZONE

Production migration begins only when the destination can safely receive workloads. The platform landing zone provides shared identity, connectivity, security, management, policy, and operational capabilities. Application landing zones provide workload-specific subscriptions and boundaries.

NVG establishes readiness gates for management groups, subscription vending, network connectivity, DNS, identity, policy, logging, security monitoring, backup, cost allocation, support, and deployment automation. Exceptions are documented and time-

bound. The landing zone is not considered complete once deployed; it evolves as migration experience reveals new requirements.

MIGRATION FACTORY OPERATING MODEL

A migration factory creates repeatable delivery without reducing workloads to identical technical tasks. It standardises methods, templates, automation, decision gates, and reporting while preserving workload-specific accountability.

NVG’s migration factory includes portfolio governance, discovery and assessment, landing-zone engineering, security, workload migration squads, business testing, service transition, and FinOps. A central programme office manages dependencies and outcomes, while workload owners retain accountability for business acceptance.

Workstream	Accountability
Portfolio and Governance	Priorities, funding, risks, decisions, and benefits
Discovery and Assessment	Inventory, dependencies, readiness, sizing, and disposition
Platform and Landing Zone	Subscriptions, identity, network, policy, security, management
Migration Squads	Remediation, deployment, data move, cutover, and rollback
Business Validation	Process testing, user acceptance, and operational sign-off
Service Transition	Monitoring, backup, support, documentation, and ownership
FinOps and Benefits	Cost baselines, optimisation, decommissioning, and value tracking

MIGRATION WAVES

NVG organises the portfolio into controlled waves. A wave contains workloads that can be prepared, migrated, validated, and stabilised within a manageable period. Waves are based on dependencies, criticality, business calendar, technical readiness, factory constraints, and team capacity.

The first wave is not simply the easiest technology. It should be sufficiently representative to validate the operating model without placing the enterprise at unacceptable risk. Subsequent waves increase complexity as the migration factory matures.

Wave	Purpose	Typical Workloads
Wave 0 - Foundation	Validate platform, tooling, governance, and runbooks	Non-production shared services and technical pilot workloads
Wave 1 - Low-Risk Production	Prove business cutover and service transition	Low-criticality independent applications
Wave 2 - Regional Services	Scale the factory and validate hybrid dependencies	Country applications and shared file or web services
Wave 3 - Business Platforms	Migrate complex applications with multiple integrations	ERP-adjacent, data, and customer operations services
Wave 4 - Manufacturing	Coordinate factories, edge, and operational technology dependencies	MES integrations, plant services, production support
Wave 5 - Core and Closure	Complete strategic platforms and datacentre exits	SAP components, remaining shared infrastructure, closure dependencies

WAVE ENTRY AND EXIT CRITERIA

Entry Criteria	Exit Criteria
Approved business owner and disposition	Business service accepted in Azure
Dependencies documented and migration group agreed	Monitoring, backup, security, and support operational
Landing-zone requirements available	RTO and RPO validation completed where required
Remediation and test plan approved	Legacy resources decommissioned or scheduled
Cutover, rollback, and communication plans approved	Costs allocated and optimisation backlog created
Change window and business resources confirmed	Evidence stored and lessons transferred to next wave

CUTOVER AND ROLLBACK

Cutover is a managed business event. It includes final synchronisation, change freeze, dependency validation, traffic transition, user testing, operational monitoring, and formal acceptance. The rollback plan identifies the latest safe decision point, data reconciliation method, authority, and communication process.

A rollback plan is not evidence of weak confidence. It is evidence that the migration team understands uncertainty. For data-intensive systems, the decision to roll back may become irreversible after new production transactions occur. These points must be explicit before the event begins.

DATA MIGRATION

Data frequently determines the migration schedule. NVG classifies data by volume, change rate, sensitivity, sovereignty, retention, and acceptable outage. The selected approach may use online replication, staged transfer, database-native tools, bulk transfer, or application-level synchronisation.

Data validation includes record counts, checksums where appropriate, business reconciliation, referential integrity, security permissions, retention controls, and evidence that integrations are using the intended target. A technically completed transfer is not sufficient until business owners confirm that the data supports the required process.

SECURITY DURING MIGRATION

Migration creates a temporary period of elevated risk. New connectivity paths, migration accounts, synchronisation tools, temporary storage, and emergency changes can expand the attack surface. NVG applies least privilege, managed identities where supported, privileged access workflows, secure secret handling, approved transfer paths, logging, and time-bound access.

Temporary controls must have removal dates. Otherwise, migration exceptions become permanent security debt.

FACTORY MIGRATION CONSIDERATIONS

Factory workloads require additional controls because production, safety, quality, and logistics may depend on local systems. Each factory wave includes local operational leadership, plant technology teams, business continuity procedures, connectivity validation, and a tested fallback process.

NVG avoids moving latency-sensitive machine-control functions into a remote cloud dependency without engineering evidence. Cloud services support planning,

analytics, integration, and centralised management, while edge and local capabilities preserve safe operation during connectivity loss.

POST-MIGRATION STABILISATION

The migration is not complete at cutover. A defined stabilisation period confirms performance, security, cost, support, backup, monitoring, user experience, and business processing. Defects are prioritised, ownership is transferred, and temporary migration tooling is removed.

The workload then enters a post-migration optimisation cycle. Right-sizing, reservations or savings plans, storage tiering, platform-service opportunities, automation, and technical-debt items are reviewed against the original business case.

DATACENTRE EXIT

Datacentre closure is managed as a business outcome. NVG verifies that no active application, integration, identity, network, backup, archive, monitoring, licensing, or contractual dependency remains. Hardware disposal follows security and environmental requirements. Facilities, circuits, support contracts, and software licences are terminated according to their notice periods.

Savings are counted only when the corresponding cost has actually been removed. A server powered off in an active datacentre does not deliver the same financial outcome as a completed site exit.

MIGRATION METRICS

Metric	What It Reveals
Workloads with Confirmed Owners	Decision accountability
Estate Discovery Coverage	Confidence in the migration scope

Metric	What It Reveals
Disposition Confidence	Quality of the Seven Rs decisions
Wave Predictability	Planned versus actual schedule and effort
Cutover Success Rate	Execution quality
Rollback Rate	Risk and preparation quality
Post-Migration Incident Rate	Stability and validation quality
Datacentre Cost Removed	realised financial value
Modernisation Backlog Burn-down	Progress beyond rehosting
Business Outcome Achievement	Whether transformation goals are being met

COMMON MIGRATION ANTI-PATTERNS

Move Everything First, Modernise Later

Without funded dates and owners, later modernisation rarely arrives.

Migrate by Server List

Business services fail when dependencies are separated.

Assume Cloud Means Resilient

Workload architecture and operations still determine availability and recovery.

Ignore Licensing and Contracts

Technical savings disappear when commercial obligations remain.

Treat Security as a Final Gate

Late security findings delay waves and create emergency exceptions.

Close the Project at Cutover

Cost, support, optimisation, and decommissioning remain unfinished.

Retain Without Governance

Temporary constraints become permanent legacy.

Measure Activity Instead of Value

A high migration count can hide poor business outcomes.

TRUSTED ADVISOR PERSPECTIVE

The Trusted Advisor does not ask only how quickly a workload can be migrated. The more important question is whether the selected strategy improves the enterprise.

A credible recommendation may be to rehost because a datacentre contract is ending, to replace because the capability is commodity, to retain because a factory dependency cannot yet be changed, or to retire because the workload has no continuing business value. The strength of the advice lies in making the trade-off visible, documenting the risk, and connecting the decision to a measurable outcome.

ARCHITECTURE DECISION RECORD

ADR-016: Adopt a Seven Rs Portfolio and Migration-Wave Model**Context**

NVG must migrate a heterogeneous estate from twelve datacentres without transferring unnecessary cost, technical debt, and operational fragmentation into Azure.

Decision

NVG will assign every workload an accountable owner, a disposition based on the Seven Rs, a confidence level, a migration group, and a target wave. Retain will be used only as a time-bound governed exception. Production waves require landing-zone readiness, dependency validation, tested cutover, and rollback, business acceptance, service transition, and a decommissioning plan.

Positive Consequences

- Migration decisions align with business value and risk.
- Dependencies and business services drive sequencing.
- The migration factory becomes repeatable and measurable.
- Datacentre closure and financial benefits are integrated into the programme.
- Modernisation opportunities are captured rather than lost.

Trade-offs

- Portfolio assessment requires sustained business participation.
- Multiple strategies create planning and skills complexity.
- Hybrid dependencies may persist during transition.
- Benefits depend on timely decommissioning and commercial action.

NORDIC VENTURES GROUP LESSON

NVG initially planned to migrate a regional order-management application by moving six virtual machines into Azure. Dependency analysis revealed that the service also relied on a shared file transfer server, an undocumented certificate process, a database reporting job, and a supplier connection hosted in another datacentre.

The migration unit was redesigned around the complete business service. The application was replatformed where practical, the file-transfer dependency was replaced with a managed integration pattern, and an unused reporting component was retired. The cutover took longer to prepare but required less emergency work and produced a cleaner target architecture.

The lesson was clear: migration speed is created by decision quality and repeatability, not by ignoring complexity.

KEY TAKEAWAYS

- Migration is a portfolio and business transformation, not a server-moving exercise.
- Discovery must combine technical telemetry with business ownership and dependency context.
- The Seven Rs provide a complete decision vocabulary; Retain is a governed exception.
- Landing-zone readiness is a prerequisite for production migration.
- Migration waves reduce risk and create an iterative learning model.
- Cutover, rollback, business validation, and service transition belong to one plan.
- Datacentre exit and cost removal are explicit programme outcomes.
- Rehosted workloads require a funded post-migration optimisation decision.
- Migration success is measured through business outcomes, not only workload counts.

REFLECTION QUESTIONS

- Does your organisation have a complete, business-validated inventory of application dependencies before migration begins?
- Which applications have been assigned a Seven Rs strategy based on evidence, rather than convenience?

- Is Retain treated as a governed exception, or as a default when no other decision has been made?
- How would your organisation validate that a migrated workload is functioning correctly from a business perspective, not only a technical one?
- If a migration wave failed midway through cutover, is the rollback plan tested, not merely written?
- Are datacentre exit dates tied to funded, tracked programme milestones?
- Does anyone own the decision to optimise a rehosted workload after migration, or does technical debt simply move to the cloud?
- Can migration success be demonstrated through business outcomes, or only through a count of servers moved?

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TRUSTED ADVISOR PRINCIPLE

Not every workload deserves the same migration strategy.

The right answer is chosen, not assumed.

A migration succeeds when every workload has a business reason, an owner, a path, and a measurable outcome.

Retiring a workload is a strategy, not a failure to modernise it.

The Trusted Advisor treats the migration factory as a repeatable operating model, not a one-time project.

Now that the estate has moved, one question inevitably follows: what do we do with everything that arrived with its technical debt intact?