

Running a data migration on gates

How I plan, track and close a migration, shown on a full worked engagement.

Migrations rarely fail on the data. They fail at the handoffs. A mapping gets changed after it was approved and nobody reissues it. A client signs off on a test they never ran. Support inherits the project on go-live day and finds out what they own a week later.

So I put a gate at each handoff. Eight stages, eight gates, and nothing downstream starts until the gate behind it is signed.

The eight gates

1	Scope signed off	Nothing else starts until this exists.
2	Profiling report accepted	The client has seen the true state of their data before anyone promises a date.
3	Mapping signed off, version frozen	The signed copy is kept separate from the working copy.
4	Exception list closed or accepted	An open exception is a decision, not an oversight.
5	Clean reconciliation in the dry run	Issues are documented, not quietly fixed.
6	Client signs off UAT	Written sign-off, from the people who actually tested.
7	Go-live accepted	Numbers are compared together, on the same call.
8	Project closed, handoff accepted	Support owns it knowingly.

What the following pages show

Migration Plan	57 tasks across 8 stages, with owners, dates and predecessors
Overview	live percent complete by stage, driven off the plan
Field Mapping	source field, target field, transformation rule, who signed it
Exception Sheet	every record that could not go as-is, and the client decision on it
Action Log	what was raised, by whom, when it is due, how it closed
Change Requests	the ask, whether it was in signed scope, the cost, the decision
Reconciliation	source count against target count, per object, pass or fail
Linkage Check	proof that migrated documents still tie to a client record
Gate Sign-off	the eight gates, who signed each one, and where the evidence is held

The engagement shown is invented. Northwind Care Services moving from CareTrack 4.2 to the Meridian Care Platform. Every client, system, identifier and number is fictional, and owners are listed as roles rather than names, so this describes a method and not anyone's engagement.

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Overview

Percent complete is computed off the plan tab, so the tracker cannot drift from the task list.

The engagement

Client	Northwind Care Services
Moving from	CareTrack 4.2 (legacy)
Moving to	Meridian Care Platform
Scope	Seven years of records, plus paper
Migration lead	Migration Lead
Kickoff	23 Feb
Target go-live	03 Aug

Progress by stage

Stage	% done
Stage 1 - Kickoff and Scope	100%
Stage 2 - Profile the Source	100%
Stage 3 - Map the Fields	100%
Stage 4 - Clean and De-dupe	100%
Stage 5 - The Dry Run	100%
Stage 6 - User Acceptance Testing	100%
Stage 7 - Freeze, Cutover, Bridge	75%
Stage 8 - Hypercare and Close	0%
Document Digitization (parallel)	100%
Backfile (T plus 6 months)	0%
OVERALL	79%

Migration Plan

The full task list. Gate rows are shaded. In the workbook this tab carries a Predecessors column of row numbers and imports straight into Smartsheet.

ID	Task	Owner	Status	%	Dates	Deliverable / Gate
Stage 1 - Kickoff and Scope						
1.1	Internal handoff from Sales	Sales / Account	Done	100%	24 Feb to 25 Feb	Scope, promises and stakeholders reviewed before the client sees you
1.2	Client kickoff meeting	Migration Lead	Done	100%	26 Feb to 26 Feb	Agenda run in order; everyone knows who does what
1.3	Ask the four questions	Migration Lead	Done	100%	27 Feb to 02 Mar	Success defined, contract signer known, data decision maker named, recovery plan agreed
1.4	Agree a single point of contact	Client PM	Done	100%	03 Mar to 03 Mar	One name, not an address book
1.5	Write the exclusion list	Migration Lead	Done	100%	04 Mar to 06 Mar	What is NOT moving, in writing
1.6	Confirm source systems and access	Client IT	Done	100%	09 Mar to 11 Mar	Read access granted, export method proven
1.7	Agree what happens to work created during the migration	Client PM	Done	100%	12 Mar to 12 Mar	The gap is named before it opens
1.8	GATE - scope signed off	Client PM	Done	100%	13 Mar to 13 Mar	Signed scope. Nothing else starts until this exists.
Stage 2 - Profile the Source						
2.1	Take the full initial export	Client IT	Done	100%	16 Mar to 17 Mar	Everything, not a sample
2.2	Run the seven checks	Migration Lead	Done	100%	18 Mar to 24 Mar	Row counts, blanks, duplicates, formats, ranges, orphans, encoding
2.3	Turn each finding into a decision	Migration Lead	Done	100%	25 Mar to 27 Mar	A finding with no decision is a finding you will meet again at cutover
2.4	Re-plan where profiling changed the estimate	Migration Lead	Done	100%	30 Mar to 31 Mar	Revised plan, with the reason attached
2.5	GATE - profiling report accepted	Client PM	Done	100%	01 Apr to 01 Apr	Client has seen the true state of their data
Stage 3 - Map the Fields						
3.1	Source to target mapping - records	Migration Lead	Done	100%	02 Apr to 13 Apr	Every field has a home, a rule and a reason
3.2	Document and metadata mapping	Migration Lead	Done	100%	14 Apr to 17 Apr	Documents are data too
3.3	Define the unique ID	Migration Lead	Done	100%	20 Apr to 22 Apr	One ID ties records and documents together
3.4	Decide on fields with nowhere to go	Client Data Owner	Done	100%	23 Apr to 27 Apr	Each one: move, drop or park, decided by the client
3.5	Client review of the map	Client PM	Done	100%	28 Apr to 30 Apr	Walked through, not emailed and hoped for
3.6	GATE - mapping signed off and version frozen	Client PM	Done	100%	01 May to 01 May	The signed copy is kept separate from the working copy
Stage 4 - Clean and De-dupe						
4.1	Write the cleaning rules	Migration Lead	Done	100%	04 May to 07 May	Rules, not one-off edits
4.2	Preview every rule before applying it	Migration Lead	Done	100%	08 May to 12 May	Row counts before and after, every time
4.3	De-duplicate, deciding which record survives	Migration Lead	Done	100%	13 May to 18 May	The client decides the survivor, not the loader
4.4	Build the exception list	Migration Lead	Done	100%	19 May to 21 May	Everything a rule cannot fix
4.5	Client resolves exceptions	Client Data Owner	Done	100%	22 May to 29 May	Decisions logged against each exception
4.6	GATE - exception list closed or formally accepted	Client PM	Done	100%	01 Jun to 01 Jun	Open exceptions are a decision, not an oversight

ID	Task	Owner	Status	%	Dates	Deliverable / Gate
Stage 5 - The Dry Run						
5.1	Load everything into the sandbox	Migration Lead	Done	100%	02 Jun to 05 Jun	The whole set. A sample proves nothing about volume.
5.2	Run the six checks	Migration Lead	Done	100%	08 Jun to 11 Jun	Counts, control totals, links, spot fidelity, processability, integration
5.3	Log every break and how the loader behaves	Migration Lead	Done	100%	12 Jun to 16 Jun	The loader log you will still be using next project
5.4	Fix, reload and re-check	Migration Lead	Done	100%	17 Jun to 23 Jun	Repeat until the reconciliation is clean
5.5	GATE - clean reconciliation in sandbox	Migration Lead	Done	100%	24 Jun to 24 Jun	Issues documented, not just fixed
Stage 6 - User Acceptance Testing						
6.1	Choose testers who do the work daily	Client PM	Done	100%	25 Jun to 26 Jun	Not managers. People who would notice.
6.2	Give testers a script and real scenarios	Migration Lead	Done	100%	29 Jun to 01 Jul	Ask a question, do not ask for a favour
6.3	Run the UAT sessions	Client SMEs	Done	100%	02 Jul to 08 Jul	Findings captured as they happen
6.4	Triage UAT findings	Migration Lead	Done	100%	09 Jul to 13 Jul	Fix, defer or explain, each one answered
6.5	GATE - client signs off UAT	Client PM	Done	100%	14 Jul to 14 Jul	Written sign-off from the people who tested
Stage 7 - Freeze, Cutover and Bridge						
7.1	Agree and communicate the freeze window	Client PM	Done	100%	15 Jul to 16 Jul	Everyone knows when the old system stops taking work
7.2	Full cutover rehearsal, timed against the freeze window	Migration Lead	Done	100%	17 Jul to 21 Jul	The whole sequence run end to end, clock running. Proves it fits.
7.3	Take the final delta export	Client IT	Done	100%	22 Jul to 22 Jul	Everything added since the initial export
7.4	Go / no-go decision, with the fallback position named	Client PM	Done	100%	23 Jul to 23 Jul	Who decides, on what evidence, and what happens if it is no
7.5	Cutover, in order	Migration Lead	Done	100%	24 Jul to 27 Jul	Records, then documents, then links
7.6	Bridge import	Migration Lead	Done	100%	28 Jul to 29 Jul	The gap closed, not left for later
7.7	Post-load reconciliation	Migration Lead	In Progress	50%	30 Jul to 31 Jul	The same six checks as the dry run, on production
7.8	GATE - go-live accepted	Client PM	In Progress	50%	03 Aug to 03 Aug	Numbers match, client accepts, together
Stage 8 - Hypercare and Close						
8.1	Agree the hypercare window before you need it	Client PM	In Progress	30%	04 Aug to 04 Aug	Length and route agreed in advance
8.2	Log and resolve what surfaces	Migration Lead	In Progress	30%	05 Aug to 25 Aug	The long tail, tracked not absorbed
8.3	Final reconciliation report	Migration Lead	Not Started	0%	26 Aug to 28 Aug	The proof the move was complete
8.4	Internal results readout	Migration Lead	Not Started	0%	31 Aug to 31 Aug	What went well, what to change next time
8.5	Handoff to Support	Support / CS	Not Started	0%	01 Sep to 02 Sep	So it lands warmly, with context

ID	Task	Owner	Status	%	Dates	Deliverable / Gate
8.6	GATE - project closed, handoff accepted	Support / CS	Not Started	0%	03 Sep to 03 Sep	Support owns it now, knowingly
Parallel - Document Digitization						
DD.1	Audit paper volume, condition and scope	Client Data Owner	Done	100%	27 Feb to 05 Mar	How much paper, in what state
DD.2	Select vendor and agree chain of custody	Client PM	Done	100%	06 Mar to 17 Mar	Who holds the records, and how it is proven
DD.3	Define indexing metadata to match the map	Migration Lead	Done	100%	18 Mar to 23 Mar	Index to the target fields, not to what is convenient
DD.4	Scan, OCR, index and QA	Scanning Vendor	Done	100%	24 Mar to 04 May	Digitized and indexed, ready to link
DD.5	Day-forward scanning live at go-live	Scanning Vendor	Done	100%	05 May to 05 May	New paper never becomes new backlog
Follow-on - Backfile (T plus 6 months)						
BF.1	Backfile scanning continues	Scanning Vendor	Not Started	0%	04 Sep to 07 Jan	The historical paper, on contract
BF.2	Bridge import of historical documents	Migration Lead	Not Started	0%	08 Jan to 14 Jan	Loaded and linked by the same unique ID
BF.3	Reconcile the backfile	Migration Lead	Not Started	0%	15 Jan to 19 Jan	Counts tie, no orphans
BF.4	Decommission paper storage	Client PM	Not Started	0%	20 Jan to 26 Jan	The reason the project was funded

Field Mapping

Frozen at gate 3. The signed copy is kept apart from the working copy so a later edit cannot pass as approved.

Source field	Source example	Target field	Transformation rule	Required ?	Status	Signed off by	Date signed
client_name	Smith, John	First Name / Last Name	Split on the comma into two fields. Trim spaces.	Yes	Signed off	Client Data Owner	01 May
client_no	NW-4471	Client ID (unique key)	Use as the unique ID. Ties records and documents together.	Yes	Signed off	Client Data Owner	01 May
dob	01/02/1950 (text)	Date of Birth	Parse text to date as MM/DD/YYYY. Ambiguous values go to the exception list.	Yes	Signed off	Client Data Owner	01 May
status_cd	A	Client Status	A to Active, I to Inactive, D to Discharged. Anything else to the exception list.	Yes	Signed off	Client Data Owner	01 May
phone	(856) 555-1212	Primary Phone	Strip formatting to digits only. Fewer than 10 digits to the exception list.	No	Signed off	Client Data Owner	01 May
svc_type	home aide / HHA / H.H.A.	Service Type (picklist)	Map every free-text variant to one picklist value. Variant list held separately.	Yes	Signed off	Client Data Owner	01 May
notes	free text, any length	Client Notes	Target truncates over 4,000 characters. Split the overflow into a linked note.	No	Signed off	Client Data Owner	23 Jun
referral_src	word of mouth	Referral Source (custom)	Custom field added under CR-01.	No	Signed off	Client PM	01 May
(paper file)	consent form, scanned	Document: type, date, author, client link	Indexed by the scanning vendor to the four target metadata fields.	Yes	Signed off	Client Data Owner	01 May
legacy_sched	visit schedule history	(not migrating)	Out of scope. Deferred to phase two under CR-02.	No	Excluded	Client PM	13 Apr

Exception Sheet

Every record that could not go across as-is, and the decision the client made on it.

Exception ID	Record ID	Field	Issue	Severity	Client decision	Status	Date resolved
E001	NW-4471	Date of Birth	Missing a required value	High	Supplied from the paper chart	Resolved	25 May
E002	NW-4471 / NW-8123	Client record	Possible duplicate: same name and date of birth	High	Confirmed a duplicate. Keep NW-4471, merge the visit history.	Resolved	25 May
E003	NW-3290	Primary Phone	Three digits, not a valid number	Low	Leave blank and correct after go-live	Resolved	25 May
E004	NW-5567	Service Type	Free-text value not in the picklist	Medium	Map to Home Health Aide	Resolved	27 May
E005	D-2204	Client link	Document has no matching client record	High	Re-indexed to NW-4471 by the vendor	Resolved	28 May
E006	D-2210	Scan quality	Paper scan is unreadable	Medium	Vendor to re-scan at a higher resolution	Resolved	29 May
E007	NW-0099	Date of Birth	Date is 02/03/1948, format ambiguous	Medium	Confirmed as 3 February from the paper chart	Resolved	26 May
E008	1,204 records	Date of Birth	Missing across a large batch	Medium	Accepted. Move blank, clean up after go-live. Logged as A004.	Accepted	27 Mar

Action Log

Raised, owned, dated, closed.

Action ID	Date raised	Source	Related Task ID	Action or decision needed	Owner	Status	Due	Resolution / notes
A001	24 Feb	Internal handoff	1.1	Sales to share the signed scope and the promises log	Sales / Account	Done	25 Feb	Received. Two promises not in scope, logged as CR-01.
A002	09 Mar	Kickoff meeting	1.6	Client to send the legacy systems list and a sample export	Client IT	Done	11 Mar	Export method proven.
A003	27 Feb	Kickoff meeting	1.3	Name the one person who decides on data questions	Client PM	Done	02 Mar	Client Data Owner named. Saved a fortnight later.
A004	25 Mar	Profiling	2.3	Decide what happens to the 1,204 records with no date of birth	Client Data Owner	Done	27 Mar	Move with the field blank. Flagged for post go-live cleanup.
A005	25 Mar	Profiling	2.3	Confirm records before 2019 are archive only and not migrating	Client PM	Done	27 Mar	Confirmed. Cut the volume by about a third.
A006	20 Apr	Email	3.3	Decide the unique ID format: client number or record number	Client Data Owner	Done	22 Apr	Client number. It is on the paper files too.
A007	06 Mar	Call	DD.2	Approve the scanning vendor and the chain of custody document	Client PM	Done	17 Mar	Approved. Custody log signed at each handover.
A008	12 Jun	Dry run	5.3	Loader silently truncates notes over 4,000 characters	Migration Lead	Done	16 Jun	Split into a linked note record. Logged in the loader notes.
A009	09 Jul	UAT	6.4	Two testers report service type showing as blank on older records	Migration Lead	Done	13 Jul	Free-text variant missed by the picklist map. Rule added, reloaded.
A010	05 Aug	Hypercare	8.2	Client asks for a count of documents loaded per year for their auditor	Migration Lead	Open	25 Aug	

Change Requests

The scope question, answered on paper each time it comes up.

CR ID	Date raised	Raised by	What is being asked for	In signed scope?	Impact on timeline	Impact on cost	Decision	Decided by	Date decided
CR-01	26 Feb	Sales / Account	Sales promised a custom field for referral source that is not in the target	No	None if done now	Half a day	Accepted. Small, and it was promised in the sale.	Client PM	02 Mar
CR-02	02 Apr	Client Data Owner	Migrate the scheduling history as well as the client and visit records	No	Plus 3 weeks	Plus 2 weeks effort	Two doors offered: move go-live, or defer to phase two. Client chose phase two.	Client PM	13 Apr
CR-03	23 Apr	Client SMEs	Keep the legacy note formatting exactly as it appears today	No	Plus 1 week	Plus 3 days	Declined. Explained what the target can and cannot hold, agreed plain text.	Client PM	27 Apr
CR-04	19 May	Client PM	Bring the go-live forward by one week to suit a board meeting	No	Minus 1 week	None	Declined. UAT sign-off would have been skipped. Reason put in writing.	Migration Lead	21 May

Reconciliation

Run before the load and again after cutover. Same checks, both times.

Check	Source count	Target count	Difference	Result	When run	Notes
Client records	1482	1482			After cutover	
Visit records	58740	58740			After cutover	
Documents (scanned and native)	6310	6310			After cutover	
Active clients	913	913			After cutover	
Control total - balances	284655	284655			After cutover	Sum, not a count
Documents with a client link	6310	6310			After cutover	See Linkage Check

Run the same checks before the load and after it. A difference of zero on every row is the only pass. This tab uses formulas, so it will not import to Smartsheet.

Linkage Check

A count matching is not proof. This checks that migrated documents still tie to a client record that exists.

Document ID	Document type	Client ID on the document	Found in records?	Result	Client IDs in the target
D-2201	Consent form	NW-4471			NW-4471
D-2202	Care plan	NW-3290			NW-3290
D-2203	Referral	NW-5567			NW-5567
D-2204	Assessment	NW-4471			NW-8123
D-2205	Consent form	NW-8123			NW-0099
D-2206	Care plan	NW-0099			

Column G is the list of client IDs that exist in the target. An orphaned document is a compliance problem, not a tidy-up job. This tab uses formulas, so it will not import to Smartsheet.

Gate Sign-off

The eight gates, who signed, and where the evidence sits.

Gate	Stage	What is being signed	Signed by	Role	Date	Evidence held
G1	Stage 1 - Kickoff and Scope	Scope, including the exclusion list	A. Reyes	Client PM	13 Mar	Email, saved to 01-scope
G2	Stage 2 - Profile the Source	Profiling report and the decisions taken from it	A. Reyes	Client PM	01 Apr	Report v1.2, countersigned
G3	Stage 3 - Map the Fields	The field map, version frozen	J. Okafor	Client Data Owner	01 May	Map v3.0 signed. Working copy kept separate.

Gate	Stage	What is being signed	Signed by	Role	Date	Evidence held
G4	Stage 4 - Clean and De-dupe	Exception list closed or formally accepted	J. Okafor	Client Data Owner	01 Jun	Exception sheet, 8 items, all answered
G5	Stage 5 - The Dry Run	Clean reconciliation in the sandbox	Migration Lead	Migration Lead	24 Jun	Reconciliation tab, all Pass
G6	Stage 6 - User Acceptance Testing	UAT passed by the people who tested	A. Reyes	Client PM	14 Jul	Sign-off sheet, 6 testers
G7	Stage 7 - Freeze, Cutover, Bridge	Go-live accepted		Client PM		Pending. Go-live acceptance meeting 03 August.
G8	Stage 8 - Hypercare and Close	Project closed and handed to Support		Support / CS		Pending. Hypercare closes 03 September.