

Migration Proof Transformation Integrity Assessment

Bijjective proof applied to 100% of records. Per-field diagnosis for every failure. Cascade impact analysis. Dependency chain verification. Ownership Ledger with cryptographic audit.

Client	[SAMPLE — Redacted]
Source system	SAP ECC 6.0 (EHP8)
Target system	SAP S/4HANA 2023
Scope	Procurement chain: Suppliers, Materials, POs, GRs, Invoices
Records analysed	847
Report date	April 2026
Report ID	MP-2026-SAMPLE-001

Currently supported	Not yet supported
Suppliers (Business Partner API) Materials (Product API) Purchase Orders Goods Receipts Invoices Source: SAP ECC 6.0+ Target: SAP S/4HANA 2020+	FI/CO (GL accounts, cost centres) SD (sales orders, deliveries) HR / HCM Custom Z-tables Oracle / Dynamics sources <i>Roadmap: FI/CO next, then SD. Non-SAP sources planned.</i>

SAMPLE REPORT — FOR ILLUSTRATION PURPOSES

How the diagnostic works

The Migration Proof diagnostic is read-only. It does not write to your source or target system. Here is what you provide and what you receive.

What you send

Step	Action	Details
1	Download the ABAP extractor	A short read-only ABAP report. No transports. No modifications. SE38 execute only. Requires display-level authorisation on procurement tables.
2	Run it in your ECC system	Select 100 invoices (or any starting set). The extractor walks the dependency chain automatically — discovering every related GR, PO, material, and supplier. Output: a structured flat file.
3	Upload the output	Upload the extract to migrationproof.io. The file contains business data — see migrationproof.io/security/ for our data handling, encryption, retention, and deletion policies.

What you get back

Deliverable	Content
Intelligence Report (PDF)	Proof summary by object type, per-field untransformable diagnosis, cascade impact analysis, dependency chain map, Ownership Ledger entries, and remediation priorities — everything shown in this sample.
Proof data file	Machine-readable output with every record's proof result, hash, and timestamp. Importable into your own reporting tools.
Remediation checklist	Prioritised list of actions: which records to fix, which field, what value to change, and how many downstream objects each fix unblocks.

Turnaround

The proof engine runs in minutes, not months. For a typical procurement extract of 100 invoices (expanding to 800-1,000 related objects), expect the Intelligence Report within the same working day.

No consultants. No workshops. No months of elapsed time. Upload the extract. Receive the report. Decide what to do next.

Executive summary

Migration Proof analysed 847 records across 5 object types in the procurement chain. Every record was tested using bijective proof: forward transformation, inverse reconstruction, and field-by-field comparison.

Total records analysed	Proven lossless	Untransformable	Proof score
847	799	48	94.3%

Key findings

1**48 records are untransformable**

These records cannot survive a lossless roundtrip. Each is diagnosed with the exact field, value, and remediation.

2**2 root causes block 29 downstream objects**

Fixing Supplier 100456 (COUNTRY=UK) and Supplier 100891 (PAY_TERMS=ZCUS) unblocks 75% of all failures.

3**799 records are provably lossless**

Each has passed the bijective proof: $f^{-1}(f(x)) \equiv x$ for every field. Logged in the Ownership Ledger.

4**Full dependency chain verified**

Supplier → Material → PO → GR → Invoice chain integrity confirmed for all proven records.

Proof summary by object type

Object type	Total	Proven	Untransformable	Proof score
Suppliers	124	112	12	90.3%
Materials	203	198	5	97.5%
Purchase orders	287	268	19	93.4%
Goods receipts	142	136	6	95.8%
Invoices	91	85	6	93.4%
TOTAL	847	799	48	94.3%

Dependency chain — creation order

Objects must be created in this order. Each level depends on the levels below it. A failure at any level blocks everything above.

Level	Object	Depends on	Status
1 (leaf)	Suppliers (124 records)	Nothing — created first	112 proven 12 failed
1 (leaf)	Materials (203 records)	Nothing — created first	198 proven 5 failed
2	Purchase Orders (287 records)	Suppliers + Materials	268 proven 19 blocked
3	Goods Receipts (142 records)	Purchase Orders	136 proven 6 blocked
4 (root)	Invoices (91 records)	Goods Receipts + Suppliers	85 proven 6 blocked

Key insight: 19 of the PO failures are not PO data quality issues — they are cascade failures from blocked suppliers. Fix the supplier, and the PO is automatically unblocked.

Top untransformable findings

Finding 1 — Supplier 100456 [Priority 1]

Field	COUNTRY
Current value	UK
Issue	Not valid ISO 3166-1 alpha-2. Correct code is GB.
Proof result	$f^{-1}(f(x)) \neq x$ — roundtrip recovers GB, not UK
Remediation	Correct to GB in source system before migration
Cascade impact	12 POs, 8 GRs, 8 invoices blocked (29 objects total)

Finding 2 — Supplier 100891 [Priority 2]

Field	PAY_TERMS
Current value	ZCUS
Issue	Custom payment term with no equivalent in target configuration
Proof result	Precondition failure — value not in target ZTERM table
Remediation	Map to standard term (e.g. ZN60) or create ZCUS in target config
Cascade impact	3 POs, 2 GRs, 2 invoices blocked (7 objects total)

Finding 3 — Material MAT-2281 [Low priority]

Field	BASE_UOM
Current value	PCS
Issue	Not a recognised ISO unit of measure. Standard equivalent: EA
Proof result	Precondition failure — value not in target MSEHI table
Remediation	Map PCS to EA in source or target configuration
Cascade impact	1 object (self only)

The full report contains all 48 untransformable findings with the same level of detail shown above.

Cascade impact analysis

Root cause failures cascade through the dependency chain. This analysis prioritises remediation by blast radius — how many downstream objects each fix unblocks.

Priority	Root cause	Field	Value	Blocked	Impact
1	Supplier 100456	COUNTRY	UK	29	12 POs + 8 GRs + 8 INVs + self
2	Supplier 100891	PAY_TERMS	ZCUS	7	3 POs + 2 GRs + 2 INVs
3	Supplier 100234	PURCH_ORG	missing	4	2 POs + 1 GR + 1 INV
4	Material MAT-4455	VALUATION	mismatch	2	1 PO + 1 GR
5	Material MAT-2281	BASE_UOM	PCS	1	Self only

Remediation priority — visual



36 resolved (fix 2 records)

12 remaining

Fix Priority 1 (Supplier 100456, COUNTRY=UK→GB): 29 objects unblocked.

Fix Priority 2 (Supplier 100891, PAY_TERMS=ZCUS→ZN60): 7 more objects unblocked.

Combined: 36 of 48 failures resolved. Fix 2 records, resolve 75% of the problem.

Bijjective proof — worked example

For every proven record, the engine executes this roundtrip:

Step 1 — Source record (ECC)

LIFNR	0000100234
NAME1	Mueller Industrietechnik
LAND1	DE
BUKRS	1000
ZTERM	NET30
AKONT	160000
EKORG	1000
KTOKK	KRED

↓ Forward transform $f(x)$ — BUKRS 1000→1710, ZTERM NET30→ZN30, EKORG 1000→1710

Step 2 — Target record (S/4HANA)

BP	100234
Name	Mueller Industrietechnik
Country	DE
Company	1710 ■
Payment	ZN30 ■
Recon	160000
PurchOrg	1710 ■
Group	KRED

↓ Inverse transform $f^{-1}(y)$ — 1710→1000, ZN30→NET30, leading zeros restored

Step 3 — Field-by-field comparison

Field	Source	Recovered	Match
LIFNR	0000100234	0000100234	✓
NAME1	Mueller Ind.	Mueller Ind.	✓
LAND1	DE	DE	✓
BUKRS	1000	1000	✓ (1000→1710→1000)
ZTERM	NET30	NET30	✓ (NET30→ZN30→NET30)

AKONT	160000	160000	✓
EKORG	1000	1000	✓ (1000→1710→1000)
KTOKK	KRED	KRED	✓

Result: $f^{-1}(f(x)) \equiv x$ — all 8 fields match — transformation proven lossless.

Ownership Ledger (sample)

Every tested record is logged with a cryptographic hash, timestamp, and proof result. This creates an auditable chain of evidence.

Record	Object	Result	Hash (SHA-256)	Timestamp
LIFNR 0000100234	Supplier	PROVEN	a7f3e291b4c8d0e5	2026-04-05T14:23:07Z
LIFNR 0000100567	Supplier	PROVEN	c9d2f4a8e6b1c3d7	2026-04-05T14:23:08Z
MATNR MAT-9921	Material	PROVEN	e1b5d8f2a4c6e9b3	2026-04-05T14:23:12Z
LIFNR 0000100456	Supplier	FAILED	–	2026-04-05T14:23:09Z
EBELN 4500017892	PO	CASCADE	–	2026-04-05T14:23:15Z
LIFNR 0000100891	Supplier	FAILED	–	2026-04-05T14:23:11Z

PROVEN $f^{-1}(f(x)) \equiv x$ verified. Safe to migrate. Hash recorded.

FAILED Roundtrip does not recover original. Root-cause diagnosis attached.

CASCADE Record may be valid but depends on a FAILED upstream record.

What this report tells you

This Intelligence Report provides four things that most migration assessments do not deliver:

- 1. Mathematical certainty, not statistical confidence.** 799 of 847 records are provably lossless. Not 'probably lossless based on a sample.' The proof is self-verifying — anyone can run the inverse and check.
 - 2. Per-field diagnosis for every failure.** The 48 untransformable records are not a count. They are 48 specific findings, each with the exact field, value, reason, and remediation.
 - 3. Cascade-aware prioritisation.** The blast radius analysis shows that fixing 2 records resolves 75% of all failures. Remediation becomes 'fix these two things first,' not 'fix everything.'
 - 4. Auditable proof trail.** The Ownership Ledger provides cryptographic evidence that every record was tested. This is the artefact your programme board, auditor, or regulator needs.
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Run this on your own data

This is a sample report using anonymised data. The real value is seeing your own records — your own untransformables, your own cascade impacts, your own proof scores.

Download the ABAP extractor. Run it in your ECC system. Upload the output. The Intelligence Report arrives in minutes, not months.

Run the read-only diagnostic on your data

migrationproof.io/diagnostic/

hello@migrationproof.io

We read every message. We reply to every question.