

FO TECH SOLUTIONS LLC

DISCOVERY FINDINGS NOTE

Acme Freight Brokerage ♦ TMS replacement and reporting

Discovery block: five working days ♦ Issued: day 6

Prepared for: Operations Director ♦ Prepared by: FO Tech Solutions, lead engineer

SAMPLE DELIVERABLE ♦ SYNTHETIC DATA, REAL FORMAT

Acme Freight Brokerage is a made-up company. The systems, counts, and people in this note are invented so the document can be published. The structure is what a real discovery block produces.

WHAT THIS NOTE IS

Five days inside Acme's systems, ending in a written record of what is there, what is broken, and what the migration should cost in time. It is the input to the written scope that follows. Nothing in it commits either side to the next phase.

SUMMARY

Acme runs freight brokerage for 140 active carriers and 60 shipper accounts on a TMS that has not had a vendor update since 2019. Load, invoice, and carrier data live in the TMS database (SQL Server 2012). Accounting is in QuickBooks Desktop. Carrier status updates arrive as EDI 214 files over SFTP and are keyed into the TMS by hand, about 400 a day. Reporting is eleven spreadsheets refreshed by one dispatcher every Monday.

The replacement TMS is chosen (contract signed, sandbox provisioned). The work is the move, the EDI automation, and reporting that does not depend on one person's Monday. The three findings that shape the scope are below, followed by the full list.

FINDINGS THAT CHANGE THE PLAN

- 1. **The load table has two identities for 8% of carriers.** 11 of 140 carriers appear twice in **Carrier** with different IDs, because the MC number field was free text until 2021. Loads reference both IDs. Deduplication has to happen before migration, with a mapping table Acme signs off, or historical carrier reporting in the new system will be wrong from day one.
- 2. **The 214 files are not all the same shape.** Three carriers send 214s with a non-standard status code set (their own codes in the AT7 segment). The manual keying step is where those get translated today, in the dispatcher's head. That translation has to be written down before it can be automated.
- 3. **Invoice totals in the TMS and QuickBooks disagree for 2023.** Sample of 200 invoices: 14 differ, all by fuel surcharge adjustments entered in QuickBooks only. The migration should treat QuickBooks as the financial source of record and the TMS as the operational one, and the reconciliation report has to say which is which for every field.

SYSTEMS INVENTORY

SYSTEM	ROLE	ACCESS OBTAINED	VOLUME
Legacy TMS (SQL Server 2012)	Loads, carriers, shippers, invoices, documents	Read-only SQL login, named	1.9M loads since 2014
QuickBooks Desktop 2022	Invoices, payments, carrier pay	Accountant copy, read-only	312k transactions
SFTP (carrier EDI)	Inbound 214, outbound 204 and 210	Read-only mirror of inbound folder	~400 files/day
Spreadsheets (11)	Weekly KPI reporting	Copies supplied by Acme	Refreshed weekly
New TMS (sandbox)	Target system	Admin in sandbox only	Empty

ALL FINDINGS

#	FINDING	EFFECT ON THE WORK
F1	Duplicate carrier identities (11 of 140)	Dedup and signed mapping table before any load is moved
F2	Three carriers use non-standard 214 status codes	Per-carrier code map, documented, before automation
F3	TMS and QuickBooks invoice totals disagree (7% of sample)	Field-level source-of-record decisions in the scope
F4	No documentation of the TMS schema; 214 tables have no foreign keys	Discovery produced a schema map (attached); integrity checks run against it
F5	Load documents (BOL, POD) are 380 GB on a file share, referenced by path	Document move is its own deliverable with its own count check
F6	Two of eleven spreadsheets pull from a view nobody can find the definition of	Rebuild the two metrics from base tables and have Acme confirm them

RISKS

- **Sign-off on the carrier mapping.** If Acme cannot confirm which of each duplicate pair is the live carrier, migration waits. Mitigation: the mapping table goes to Acme in week one of the build, with a proposed answer for every row.
- **Cutover during the quarter-end close.** Accounting closes the books in the first week of each quarter. Cutover is planned for the third week of a month.
- **The vendor file loader rejects rows it does not report.** Seen once in the sandbox. Every import is followed by a row-count reconciliation, which catches it.

RECOMMENDATION

Move in two phases. Phase one is carriers, shippers, and open loads, with 214 automation live for all carriers on standard codes. Phase two is historical loads, documents, and the three non-standard carriers. Two cutovers, each small enough to roll back over a weekend.

Phase one is an estimated five weeks of work, including one week of reconciliation and a rehearsed rollback. Phase two is an estimated four weeks and can start the week after phase one signs off. Reporting is rebuilt in phase two against the new TMS, from base tables, and the two unexplained metrics are replaced with ones Acme can define.

Estimates are in weeks because they are about sequence and risk. The commercial figures are in the quote that accompanies the written scope, and change only if the scope does.

OPEN QUESTIONS FOR ACME

1. Which of each duplicate carrier pair is the live record? (F1, 11 rows, list attached.)
2. Is QuickBooks the source of record for invoice totals, including the 2023 adjustments? (F3.)
3. Do the three non-standard carriers accept a request to move to standard 214 codes, or is the code map permanent? (F2.)
4. How far back do historical loads need to be queryable in the new TMS: all of 2014 onward, or the last three years with the rest in the warehouse?

NEXT STEP

The written scope for phase one follows within two business days of Acme's answers to the questions above, with the quote attached. A 30-minute call to walk through this note is offered first.