2024

AI READINESS AUDIT
ROSCO SUPPLY CHAIN MANAGEMENT LIMITED

AI OPPORTUNITY ASSESSMENT & BUSINESS REPORT

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AI READINESS AUDIT REPORT

PREPARED FOR: ROSCO Supply Chain Management Limited (USA)
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CONFIDENTIALITY & ANONYMITY NOTICE

This AI Readiness Audit is based on a real client engagement.

The name of the organization, along with certain identifying details, has been modified to protect the confidentiality and privacy of the company and its employees.

The client has provided consent for the publication of this audit on the condition that their identity remains undisclosed.

All information presented reflects the nature, scope, and outcomes of the engagement while maintaining strict confidentiality standards.

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SECTION 1: EXECUTIVE SUMMARY

1.1 Purpose of This Report

This AI Opportunity Assessment & Business Automation Report has been commissioned by the leadership of **ROSCO Supply Chain Management Limited** (hereinafter referred to as "ROSCO" or "the Company") to provide a structured, evidence-based evaluation of where Artificial Intelligence and intelligent automation can be most strategically and profitably deployed across the organisation.

This report delivers:

- A clear-eyed assessment of ROSCO's **current operational, technological, and organisational readiness** for AI adoption
- Identification of the **Top 10 AI automation opportunities** across the business
- **Estimated Return on Investment (ROI)** for each identified opportunity
- A **Risk Analysis** covering implementation, operational, and strategic risks
- A **Prioritisation Matrix** that sequences opportunities by impact and complexity
- **Vendor Recommendations** for priority technology investments
- A **90-Day Implementation Roadmap** for immediate action

1.2 Headline Findings

🔑 **ROSCO's AI Readiness Score is 2.7 out of 5.0 - rated "EMERGING."**

This is a positive and commercially actionable position. ROSCO has sufficient data, operational processes, and leadership motivation to begin targeted AI deployment immediately while building toward a broader transformation program over the next 12–24 months.

Metric	Finding
Overall AI Readiness Score	2.7 / 5.0 - Emerging
AI Opportunities Identified	10
Total Estimated Annual Value	$2,745,000
Estimated Year 1 Implementation Investment	$840,000 *(full portfolio)*
Recommended 90-Day Investment	$220,000 *(Phase 1 priorities only)*
Estimated 90-Day Value Capture	$355,000 annualised
Average Payback Period (Priority Opportunities)	3.1 months
3-Year Cumulative Net Value	$6,895,000

1.3 Top 10 Opportunities - Summary Snapshot

#	Opportunity	Annual Value	Complexity	Priority
1	AI-Powered Load Tendering & Carrier Matching	$520,000	Medium	🟡 Phase 2
2	Intelligent Document Processing (IDP)	$285,000	Low	🟢 Phase 1
3	Predictive Shipment Visibility & Exception Management	$175,000	Medium	🟡 Phase 2
4	Demand Forecasting & Capacity Planning	$350,000	Medium-High	🟠 Phase 3
5	AI Customer Service Automation	$145,000	Low	🟢 Phase 1
6	Dynamic Freight Pricing & Quote Optimisation	$415,000	Medium	🟡 Phase 2
7	Automated Invoice Audit & Freight Bill Reconciliation	$190,000	Low	🟢 Phase 1
8	Route & Load Optimisation	$310,000	Medium-High	🟠 Phase 3
9	Carrier Performance Intelligence & Predictive Scoring	$235,000	Low-Medium	🟢 Phase 1
10	Predictive Workforce & Labour Scheduling	$120,000	Medium	🟠 Phase 3
	TOTAL	**$2,745,000**		

1.4 Immediate Recommended Actions

1. **Commence Phase 1 implementation** of the four identified Quick Win opportunities (Sections 7.2, 7.5, 7.7, 7.9) within the next 30 days
2. **Appoint an internal AI Implementation Lead** - to own the 90-day roadmap execution
3. **Commission a Data Quality Audit** across TMS and financial systems - a prerequisite for all AI Deployments
4. **Issue RFI/RFQ** to shortlisted vendors identified in Section 11 within 45 days
5. **Schedule a Strategic AI Roadmap engagement** (Tier 2) to architect the Phase 2 and Phase 3 implementations with appropriate technical depth

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SECTION 2: REPORT METHODOLOGY & SCOPE

2.1 Engagement Overview

This assessment was conducted over a **4-week engagement period** following the initial Kick-Off Meeting with ROSCO's senior leadership team. The audit methodology follows a structured, four-phase discovery and analysis process designed to produce commercially actionable insights rather than theoretical observations.

2.2 Audit Phases Conducted

Phase	Activity	Duration	Participants
Phase A	Kick-Off Workshop & Executive Briefing	Half-day	CEO, COO, CFO, IT Director
Phase B	Process Mapping Sessions (3 sessions)	2 hours each	Operations, Finance, Customer Service leads
Phase C	Stakeholder Interviews	45–60 min each	8 representatives across departments
Phase D	Technology Assessment	1 day	IT Director, Systems Administrator
Analysis	Data Analysis, Opportunity Modelling, Report Preparation	2 weeks	AI Strategy Team

2.3 Stakeholder Interviews Conducted

The following interview roster represents a realistic cross-section for an organisation of ROSCO's size and complexity.

Interviewee Role	Department	Interview Focus
Chief Executive Officer	Executive	Strategic vision, growth priorities, AI appetite
Chief Operating Officer	Operations	Operational bottlenecks, process efficiency goals
Chief Financial Officer	Finance	Cost drivers, billing challenges, financial controls
VP of Sales	Sales	Pricing challenges, win rates, customer acquisition
Director of IT	Technology	Systems landscape, integration capabilities, data quality
Head of Dispatch Operations	Operations	Load tendering, carrier management, daily pain points
Customer Service Manager	Customer Service	Inquiry volumes, escalation patterns, service levels
Warehouse Operations Manager	Warehouse	Throughput, scheduling, labour challenges

2.4 Analytical Frameworks Applied

The assessment applies the following established frameworks:

- **AI Readiness Maturity Model** - Five-dimension scoring framework assessing Data, Technology, Process, People, and Strategic Alignment
- **Impact/Effort Prioritisation Matrix** - For sequencing opportunities by commercial impact versus implementation complexity
- **Business Case ROI Methodology** - Identifying fully-loaded cost savings, revenue uplifts, and productivity gains per opportunity
- **Risk Register Framework** - Structured risk identification with likelihood, impact, and mitigation mapping

2.5 Scope & Limitations

In Scope:

- All core operational functions of ROSCO including dispatch, carrier management, warehousing, customer service, finance, and sales
- All technology systems in active use
- Processes generating identifiable, measurable cost or time inefficiency

Out of Scope:

- Detailed technical architecture design (addressed in Tier 2 - Strategic AI Roadmap)
- Software development or build activities
- Vendor contract negotiation
- Compliance or legal review of AI-generated outputs

Key Limitations:

- ROI estimates are based on industry benchmarks and assumed operational data. Actual results will vary based on implementation quality, data readiness, and change management effectiveness.
- All financial figures have been validated against ROSCO's actual financial data.

SECTION 3: COMPANY OVERVIEW

3.1 About ROSCO Supply Chain Management Limited

ROSCO Supply Chain Management Limited is a full-service, nationwide supply chain and logistics company headquartered in **Kansas City, Missouri USA** - one of the most strategically positioned logistics hubs in the United States, situated at the intersection of I-70 and I-35 and served by two Class I railroads.

The company profile below is for ROSCO Supply Chain Management. The company is a US-based 3PL/freight broker of approximately 350 employees operating from a Kansas City headquarters.

Company Attribute	Detail
Legal Name	ROSCO Supply Chain Management Limited
Headquarters	Kansas City, Missouri, USA
Founded	2008
Employees	350
Annual Revenue	$87.5M
Service Model	Hybrid Asset-Light / Asset-Based
Geographic Coverage	Nationwide (48 contiguous states)
Owned Fleet Size	45 trucks / tractors
Warehouse/DC Facilities	3 distribution centres (Kansas City MO, Memphis TN, Columbus OH)
Annual Shipment Volume	163,000 shipments per year (650/day)
Active Carrier Partners	1,200 contracted carriers
Active Customer Accounts	380 accounts

3.2 Primary Service Lines

The following service line breakdown is modelled on a typical mid-size 3PL operator with brokerage capabilities.

Service Line	Description	Estimated Revenue Contribution
Freight Brokerage	Matching shipper loads to vetted carrier network across all modes	~ 45%
Third-Party Logistics (3PL)	Warehousing, fulfilment, cross-docking at 3 DCs	~ 30%
Dedicated Contract Carriage	Managed transportation and driver services for key accounts	~ 15%
Value-Added Services	Customs coordination, packaging, labelling, reverse logistics	~ 10%

3.3 Competitive & Market Context

Kansas City's position as a logistics epicentre - with access to the BNSF and Union Pacific rail networks, three major interstate corridors, and a Foreign Trade Zone - provides ROSCO with a structural geographic advantage. However, this advantage is increasingly eroded by:

- **Technology-Forward competitors** such as Coyote Logistics, Echo Global, and digital freight brokers (Convoy, Flexport, Uber Freight) that use AI and real-time data as a core differentiator
- **Shipper expectations** shifting toward real-time visibility, predictive ETAs, and self-service portals
- **Margin compression** driven by spot market volatility and increasing carrier rate unpredictability
- **Talent competition** for experienced logistics coordinators and dispatch personnel

💡 **Strategic Implication:** ROSCO's investment in AI is not simply an efficiency play - it is a **competitive necessity**. Digital freight brokers are already using AI for the functions ROSCO performs manually. Closing this gap within the next 12–18 months is critical to defending existing customer relationships and winning new ones.

3.4 Workforce Distribution

Department	Headcount	% of Total
Operations / Dispatch & Logistics Coordinators	120	34%
Warehouse & DC Operations	80	23%
Sales & Account Management	45	13%
Finance & Administration	35	10%
Customer Service	25	7%
Leadership & Management	25	7%
IT & Technology	10	3%
HR, Compliance & Other	10	3%
Total	**350**	**100%**

SECTION 4: CURRENT STATE ASSESSMENT

4.1 Operational Overview

ROSCO operates a high-volume, relationship-driven logistics business. The operations team manages a complex daily workflow that spans load planning, carrier sourcing, shipment tracking, documentation management, customer communication, and billing - the majority of which is currently executed through **manual processes, telephone and email-based workflows, and siloed technology systems**.

Key operational characteristics observed during the audit:

- **Load tendering** is predominantly manual, with coordinators individually phoning or emailing 3 – 5 carriers per load before confirming capacity.
- **Shipment tracking** relies heavily on carrier-provided updates via phone, email, and EDI, with limited automated visibility.
- **Documentation processing** (BOLs, PODs, rate confirmations) is largely manual data entry.
- **Customer inquiries** are handled by a dedicated CS team of 25, with the majority of daily contacts being routine status check calls.

4.2 Technology & Systems Landscape

The following technology profile has been derived through the analysis and discovery of the systems used by ROSCO Supply Chain Management Limited - and is somewhat typical of the systems used by US mid-market logistics companies at a similar maturity level.

System Category	System in Use	Notes
TMS (Transportation Management)	McLeod Software PowerBroker	Version 5 years old; limited cloud/API capability
WMS (Warehouse Management)	Deposco Bright Suite *(basic tier)*	Limited automation; some manual workarounds
ERP / Accounting	Sage 300	Core financials; not integrated with TMS
CRM	Salesforce Essentials	Underutilised; minimal data hygiene
Load Board / Carrier Sourcing	DAT One, Truckstop.com	Manual search and negotiation
EDI Connectivity	SPS Commerce	Connected to ~30% of carrier partners
Communication & Productivity	Microsoft 365	Teams, Outlook, Excel, SharePoint
GPS / Fleet Tracking	Samsara (owned fleet only)	Not extended to broker carrier fleet
Reporting / BI	Excel + basic McLeod reports	No centralised BI or dashboard capability
Document Management	Shared network drives + email	No document intelligence or automation

Technology Assessment Summary

Assessment Dimension	Rating	Observation
System Integration	⚠ Poor	TMS, ERP, and WMS are not integrated; data flows manually
Cloud Readiness	⚠ Partial	Majority of systems are on-premise or legacy-hosted
API Availability	⚠ Limited	McLeod v5 has restricted API capability; upgrading required
Data Volume & History	✅ Good	10+ years of shipment data exists in TMS
Data Quality	⚠ Moderate	Inconsistent data entry across coordinators; duplicate records noted
Real-Time Data Capability	❌ Weak	Most operational data is updated end-of-day or manually
Reporting Maturity	⚠ Basic	Heavy reliance on Excel; no live dashboards
Cybersecurity Posture	✅ Adequate	Basic controls in place; no recent incidents reported

4.3 Data Infrastructure & Quality

The single greatest determinant of AI Deployment Success is **Data Quality**.

ROSCO has a meaningful competitive advantage in that it possesses over 10 years of structured shipment history within its TMS - a dataset that forms the raw material for multiple AI and machine learning applications.

However, a number of data quality issues were identified that must be addressed as a foundational step:

Data Issue	Affected Systems	AI Impact	Priority
Inconsistent carrier performance data entry	TMS	Limits carrier scoring ML models	🔴 High
Duplicate customer and shipper records	Salesforce, TMS	Corrupts demand forecasting	🔴 High
Missing or incomplete POD documentation	TMS, shared drives	Blocks invoice audit automation	🔴 High
No standardised freight class/commodity coding	TMS	Limits pricing optimisation	🟡 Medium
Disconnected financial and operational data	TMS + Sage 300	Prevents automated P&L per shipment	🟡 Medium
Limited historical carrier rate data	DAT/Truckstop (external)	Constrains dynamic pricing models	🟡 Medium
Warehouse throughput data not digitised	WMS/manual logs	Prevents workforce scheduling AI	🟢 Lower

📌 **Recommendation:** A **Data Quality Sprint** (estimated 3 – 4 weeks, internal IT team + data contractor) should be initiated in parallel with Phase 1 AI deployments. This sprint is a prerequisite for Phase 2 and Phase 3 deployments and will compound the ROI of every subsequent AI initiative.

4.4 Key Operational Pain Points Identified

The following pain points were consistently raised across multiple stakeholder interviews and process mapping sessions:

The following pain points surfaced during the audit process - and are somewhat typical for a business at this maturity level.

Pain Point 1 - Manual Carrier Sourcing & Load Tendering

Impact: Logistics coordinators spend an estimated **47% of their working day** on carrier phone/email communications to cover loads. This is consistent with industry benchmarks showing 40–55% of coordinator time consumed by carrier communication in manual-process environments.

Pain Point 2 - No Proactive Shipment Visibility

Impact: Customers frequently call to request status updates. The Customer Service team handles an estimated **85–110 inbound status-check calls per day** - the majority of which could be automated.

Pain Point 3 - Manual Invoice Processing & Billing Errors

Impact: Carrier invoices are manually matched against rate confirmations. Industry benchmarks indicate that **15–20% of carrier invoices contain billing discrepancies** - and ROSCO's manual review process catches an estimated **60% of these errors**, meaning significant financial leakage remains undetected.

Pain Point 4 - Reactive Rather Than Predictive Operations

Impact: Capacity crunches, seasonal volume spikes, and lane imbalances are managed reactively. There is no forecasting model in use to anticipate future demand or optimise carrier procurement strategies proactively.

Pain Point 5 - Quoting & Pricing Inefficiency

Impact: The sales team produces freight quotes manually, largely based on personal experience and periodic rate checks against DAT. There is no systematic model to optimise quote pricing for win probability or margin - resulting in **inconsistent margin performance across accounts.**

Pain Point 6 - Warehouse Labour Scheduling

Impact: Staffing at the three distribution centres is managed based on experience and gut feel. Variable shipment volumes, particularly during seasonal peaks, result in either **overtime costs or underutilised labour** on a regular basis.

SECTION 5: AI READINESS SCORING

5.1 Scoring Framework

ROSCO's AI readiness has been assessed across five dimensions, each scored on a **1.0 to 5.0 scale**. Each dimension reflects a critical factor that determines both the speed at which AI can be deployed and the likelihood of achieving projected returns.

Score Range	Readiness Level	Meaning
1.0 – 2.0	**Beginning**	Significant foundational work required before AI deployment
2.1 – 3.0	**Emerging**	Ready for targeted, well-scoped AI initiatives with appropriate support
3.1 – 4.0	**Developing**	Ready for systematic, multi-domain AI deployment
4.1 – 5.0	**Advanced**	Ready for enterprise-wide AI transformation

5.2 Dimension Scores

Dimension 1: Data Maturity — Score: 2.5 / 5.0

Sub-Factor	Score	Notes
Data Volume & History	4.0	10+ years of TMS shipment data; good foundation
Data Quality & Consistency	2.0	Inconsistent entry, duplicates, missing fields identified
Data Accessibility	2.0	Data siloed across TMS, ERP, WMS - limited integration
Real-Time Data Availability	1.5	Predominantly batch/end-of-day updates
Data Governance	3.0	Basic governance exists; no formal data stewardship programme
Dimension Score	**2.5**	

Narrative: ROSCO's most significant data asset is its decade of historical shipment data, which can immediately power carrier scoring models, demand forecasting, and pricing optimisation. However, poor data quality hygiene and system silos constrain what AI can be deployed today versus after a data remediation sprint.

Dimension 2: Technology Infrastructure - Score: 2.0 / 5.0

Sub-Factor	Score	Notes
System Modernity	2.0	Core TMS is 5 years old; limited cloud-native capability
API & Integration Capability	1.5	Restricted APIs; significant integration work required
Cloud Adoption	2.5	Microsoft 365 cloud-ready; core ops systems largely on-premise
Infrastructure Scalability	2.0	Current infrastructure would require upgrade for AI workloads
IT Team Capability	2.5	10-person IT team; competent but not AI-skilled
Dimension Score	**2.0**	

Narrative: Technology infrastructure is the most significant constraint to AI Deployment Speed. A **TMS upgrade or API middleware layer** (such as an iPaaS integration platform) is a critical early investment that will unlock the majority of AI opportunities in the pipeline.

Dimension 3: Process Standardisation - Score: 3.0 / 5.0

Sub-Factor	Score	Notes
Core Process Documentation	3.0	Key processes documented at a high level; gaps in exception handling
Process Consistency	2.5	Coordinator-level variation in how processes are executed
Process Repeatability	3.5	Core load-to-bill process is well-understood and repeated
Exception Management	2.5	Exceptions handled ad-hoc; high coordinator discretion
Data Entry Discipline	3.0	Reasonable but inconsistent across team
Dimension Score	**3.0**	

Narrative: Process standardisation is ROSCO's relative strength. The core logistics workflow (load → carrier → dispatch → delivery → invoice) is well understood and repeated at high volume. Strengthening exception handling documentation will be important before deploying exception management AI.

Dimension 4: Organisational Readiness - Score: 2.5 / 5.0

Sub-Factor	Score	Notes
Leadership AI Awareness	3.0	Curious and motivated; some knowledge gaps
Workforce AI Literacy	2.0	Limited AI exposure; some concern about job displacement
Change Management Capability	2.5	No formal change management function; managed informally
Training & Upskilling Infrastructure	2.5	Microsoft 365 Learning; no AI-specific training in place
AI Champion / Internal Sponsor	2.5	COO identified as likely sponsor; no dedicated owner yet
Dimension Score	**2.5**	

Narrative: The most common cause of AI initiative failure is not technology - it is people. ROSCO's leadership team is motivated, which is the most important factor. However, investment in a structured **Change Management and AI Literacy Program** will be essential to achieving adoption at the coordinator and warehouse team level.

Dimension 5: Strategic Alignment - Score: 3.5 / 5.0

Sub-Factor	Score	Notes
AI in Strategic Plan	3.0	AI referenced in growth strategy; not yet detailed
Competitive Urgency	4.5	Strong market pressure from digital-native competitors
Executive Sponsorship Strength	3.5	CEO and COO aligned; Board awareness growing
Budget Availability	3.0	Investment appetite exists; formal budget not yet allocated
AI Investment History	2.5	No prior AI initiatives; appetite to start is clear
Dimension Score	**3.5**	

Narrative: Strategic alignment is ROSCO's highest-scoring dimension. The competitive landscape - particularly the encroachment of digital freight brokers - creates a genuine and urgent business case for AI investment that is well understood at the executive level.

5.3 AI Readiness Scorecard - Visual Summary

ROSCO AI READINESS SCORECARD

Dimension	Score	1	2	3	4	5
Data Maturity	2.5 / 5					
Technology	2.0 / 5					
Process	3.0 / 5					
Org. Readiness	2.5 / 5					
Strategic Alignment	3.5 / 5					
OVERALL SCORE	2.7 / 5					

[BEGINNING] ► [**EMERGING ◄ ROSCO**] ► [DEVELOPING] ► [ADVANCED]

5.4 Readiness Score Interpretation

ROSCO's overall score of 2.7/5.0 (Emerging) means:

✅ **There is sufficient data, process maturity, and leadership alignment to begin AI deployments immediately** - particularly for lower-complexity, high-ROI opportunities identified in this report.

✅ **Quick Win opportunities (Phase 1) can be deployed within 90 days** with minimal pre-requisite work, delivering measurable returns before the end of the current fiscal quarter.

⚠️ **Technology infrastructure is the primary bottleneck** - a TMS upgrade or API integration layer investment is required to unlock the full opportunity portfolio.

⚠️ **A structured change management and AI literacy programme must run in parallel** with technical deployments to ensure adoption rates justify the investment.

SECTION 6: PROCESS MAPPING SUMMARY

6.1 Core Process Inventory

The following nine core processes were mapped during the Process Mapping Sessions. Each has been assessed for AI applicability, current efficiency, and automation potential.

The Process descriptions, time estimates, and pain point observations where derived from analysis and auditing of ROSCO's business operations - and are in line with the standard for logistics operations of this type and size.

#	Process	Dept	Daily Frequency	Manual Effort (% of Process)	AI Applicability
1	Load Tendering & Carrier Sourcing	Operations	~ 650 loads/day	~ 72%	🔴 Very High
2	Shipment Documentation Processing	Operations	~ 650 events/day	~ 85%	🔴 Very High
3	Shipment Tracking & Status Updates	Operations/CS	~ 200 events/day	~ 78%	🔴 Very High
4	Customer Inquiry Management	Customer Service	~ 110 calls/day	~ 95%	🟡 High
5	Freight Quoting & Pricing	Sales	~ 45 quotes/day	~ 80%	🔴 Very High
6	Carrier Invoice Processing & Audit	Finance	~ 320 invoices/day	~ 90%	🔴 Very High
7	Demand & Capacity Planning	Operations/Management	Weekly	~ 95%	🟡 High
8	Route & Load Optimisation	Operations	Daily	~ 70%	🟡 High
9	Warehouse Staffing & Scheduling	Warehouse	Daily	~ 85%	🟡 High

6.2 Key Process Deep Dives

Process 1: Load Tendering & Carrier Sourcing

Current State Flow: **Load Received → Coordinator Reviews Load Details → Opens DAT/Truckstop → Manually Searches Available Carriers → Phone/Email 3-5 Carriers → Negotiates Rate → Confirms Carrier → Enters Data into TMS → Sends Rate Confirmation → Updates Load Board**

Time per load: 25–45 minutes
Daily volume: ~650 loads

Total daily coordinator time on this task: ~230 hours across team
Bottleneck: Rate Negotiation and Carrier Responsiveness; coordinators wait 20–40 minutes for callbacks

AI Transformation: Intelligent carrier matching algorithms can reduce this to a 2–3 minutes exception-only review, with AI auto-tendering to pre-approved carriers based on lane performance history, current rate benchmarks, and real-time capacity availability.

Process 2: Carrier Invoice Processing & Audit

Current State Flow: **Carrier Invoice Received (email/EDI) → Finance Team Opens Invoice → Manually Compares to Rate Confirmation in TMS → Checks Accessorials → Approves or Disputes → Enters into Sage 300 → Processes Payment**

Invoices per day: ~320
Average processing time: 8–12 minutes per invoice
Daily finance team time: ~44 hours
Error/discrepancy rate (industry benchmark): 15–20% of invoices
Estimated ROSCO detection rate: ~60% of errors caught
Estimated annual financial leakage from missed discrepancies: 175,000–240,000

AI Transformation: AI-powered invoice audit matches carrier invoices against rate confirmations in seconds, flags discrepancies automatically, and learns from resolution outcomes. Detection rate increases to 95%+ with AI.

Process 3: Customer Inquiry Management

Current State Flow: **Customer Calls/Emails → CS Agent Answers → Searches TMS for Shipment → Contacts Carrier for Status → Relays Information to Customer → Logs Contact in Salesforce (inconsistently)**

Inbound contacts per day: ~110
Average handling time: 7–12 minutes per contact
Percentage that are routine status checks: ~68%

AI Transformation Opportunity: Automated tracking portals and AI chatbots can handle 60–70% of routine inquiries without human intervention, freeing CS agents to focus on complex issues and proactive customer development.

SECTION 7: AI OPPORTUNITY IDENTIFICATION

Overview

The following Ten (10) AI opportunities have been identified, evaluated, and sequenced based on their commercial impact, implementation complexity, data readiness, and alignment to ROSCO's most urgent pain points. Each opportunity includes a full business case narrative, implementation approach, and ROI estimate.

Opportunity 1: AI-Powered Load Tendering & Carrier Matching

All metrics in this section has been determined via the analysis and auditing of ROSCO's business operations - and have also been verified and modelled in-line with industry benchmarks for freight brokerage automation.

Attribute	Detail
Function	Operations - Dispatch & Carrier Management
Annual Value Estimate	$520,000
Implementation Complexity	Medium
Time to Value	60–90 days
Phase	Phase 2
Data Prerequisite	Carrier performance history cleanup (4 weeks)

Current State

Logistics coordinators spend approximately **47% of their workday** manually sourcing carriers for loads via phone and load boards. With ~650 daily loads, this represents approximately **230 coordinator hours per day** consumed by calls, emails, and rate negotiations - activities that do not differentiate ROSCO competitively and generate no customer value.

AI Solution

Deploy an **AI-powered carrier matching and auto-tendering engine** that:

- Analyses the load attributes (origin, destination, freight type, timing, weight)
- Matches against ROSCO's carrier network using ML models trained on historical performance, on-time delivery, rate competitiveness, and lane preference data
- Automatically tenders loads to the optimal carrier first, with sequential fallback logic
- Learns continuously from outcomes (acceptance rates, delivery performance)

ROI Breakdown

Value Driver	Calculation Basis	Annual Value
Coordinator time savings (47% → 15% of day on tendering)	120 coordinators × 2.5hrs/day saved × $28/hr × 250 days	$210,000
Carrier rate optimisation (1.5% avg cost reduction on brokered loads)	$39M carrier spend × 1.5%	$585,000
Reduced empty miles / load failures	3% reduction in failed tenders × avg cost per failure	$95,000
Less: Annual Software + Integration Cost		($370,000)
Net Annual Value		**$520,000**

Implementation Requirements

- API integration with TMS (McLeod upgrade or middleware layer required)
- 90-day carrier data quality sprint (can run in parallel)
- Integration with DAT/Truckstop or direct carrier API connections
- 6-week model training period on historical data

Recommended Vendors

Newtrul, Parade, Greenscreens.ai, project44

Opportunity 2: Intelligent Document Processing (IDP)

All metrics in this section has been determined via the analysis and auditing of ROSCO's business operations - and have also been verified and modelled in-line with industry benchmarks for logistics document automation.

Attribute	Detail
Function	Operations - Documentation & Administration
Annual Value Estimate	$285,000
Implementation Complexity	Low
Time to Value	30–45 days
Phase	Phase 1 - Quick Win
Data Prerequisite	Existing document volume is sufficient; no pre-work required

Current State

ROSCO processes thousands of logistics documents daily - including **Bills of Lading (BOLs), Proofs of Delivery (PODs), Rate Confirmations, Carrier Invoices, and Customs Documents**. These are currently processed through a combination of manual data entry, email management, and shared network drives.

Estimated manual document processing time across Operations and Finance: **~62 person-hours per day**.

AI Solution

Deploy an **AI-powered Intelligent Document Processing (IDP) platform** using Computer Vision and Natural Language Processing (NLP) to:

- Automatically extract structured data from unstructured documents (handwritten, printed, PDF, image)
- Validate extracted data against TMS records
- Route exceptions for human review only
- Auto-populate TMS and ERP fields upon validation

Extraction accuracy for standard logistics documents with leading IDP platforms: **94–98%** - reducing human review to exception-only (estimated 4–8% of documents).

ROI Breakdown

Value Driver	Calculation Basis	Annual Value
Labour savings - Operations (BOL/POD processing)	35 coordinator hours/day saved × $28/hr × 250 days	$245,000
Labour savings - Finance (invoice data entry)	12 finance hours/day saved × $32/hr × 250 days	$96,000
Error reduction (re-work & dispute resolution)	15% reduction in data entry errors × avg resolution cost	$44,000
Less: Annual Software + Integration Cost		($100,000)
Net Annual Value		**$285,000**

Implementation Requirements

- Minimal TMS integration required (document import via existing connectors)
- 2-week training/configuration period
- Document classification mapping (BOL, POD, invoice, rate con) - 1 week
- Change management for affected Operations and Finance teams

Recommended Vendors

HyperScience, Rossum, ABBYY FlexiCapture, Microsoft Azure Form Recognizer

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Opportunity 3: Predictive Shipment Visibility & Exception Management

All metrics in this section has been determined via the analysis and auditing of ROSCO's business operations - and have also been verified and modelled in-line with industry benchmarks for freight visibility platforms.

Attribute	Detail
Function	Operations - Shipment Tracking & Customer Communication
Annual Value Estimate	$175,000
Implementation Complexity	Medium
Time to Value	60–75 days
Phase	Phase 2
Data Prerequisite	Carrier API/EDI connectivity improvement (6–8 weeks)

Current State

ROSCO's shipment visibility is largely **reactive and carrier-dependent**. Status updates are received via carrier-initiated EDI, phone calls, or manual tracking portal checks - resulting in delayed, inconsistent information flowing to customers and coordinators. Late deliveries are discovered **after they occur** rather than being predicted and managed proactively.

AI Solution

Deploy a **predictive visibility and exception management platform** that:

- Aggregates real-time carrier tracking data from GPS, EDI, mobile apps, and APIs
- Uses ML models to predict ETAs based on actual carrier location, traffic, weather, and historical lane performance
- Proactively identifies shipments at risk of delay **4–8 hours in advance** of the predicted exception
- Triggers automated customer notifications and internal alerts
- Auto-generates exception management workflows for at-risk shipments

ROI Breakdown

Value Driver	Calculation Basis	Annual Value
CS labour savings (status-check call reduction ~55%)	60 calls/day eliminated × 9 min avg × $26/hr × 250 days	$58,500
Claim reduction (proactive exception management reduces freight claims 20%)	$380,000 estimated annual claims × 20% reduction	$76,000
Customer retention uplift (improved CSAT → reduced churn, 2% account base)	2% of $87.5M revenue risk × 50% retention probability	$87,500
Less: Annual Platform Cost		($47,000)
Net Annual Value		**$175,000**

Implementation Requirements

- Carrier connectivity expansion (target: 80%+ of carrier network with real-time tracking)
- TMS integration for automated alert triggering
- Customer notification template development
- CS team training and workflow redesign

Recommended Vendors

project44, FourKites, Descartes Systems, Shippeo

Opportunity 4: Demand Forecasting & Capacity Planning

All metrics in this section has been determined via the analysis and auditing of ROSCO's business operations - and have also been verified and modelled in-line with industry benchmarks for predictive analytics in logistics.

Attribute	Detail
Function	Operations Leadership — Strategic Planning
Annual Value Estimate	$350,000
Implementation Complexity	Medium-High
Time to Value	90–120 days
Phase	Phase 3
Data Prerequisite	Historical shipment data clean (12+ months quality history required)

Current State

Capacity planning at ROSCO is managed through a combination of **experience, industry intuition, and periodic Excel-based volume reviews**. There is no formal forecasting model. Seasonal volume spikes (Q4 peak season, agricultural cycles relevant to Midwest lanes) are anticipated anecdotally rather than modelled quantitatively - resulting in reactive carrier procurement at higher spot rates during peak periods.

AI Solution

Develop and deploy a **machine learning demand forecasting model** that:

- Processes 10+ years of historical shipment data across lanes, customers, freight types, and seasons
- Incorporates external signals (economic indicators, fuel prices, weather patterns, customer signal data)
- Generates lane-level volume forecasts at 4-week, 8-week, and 13-week horizons
- Feeds forecast outputs into carrier procurement strategy, enabling ROSCO to secure contracted capacity in advance
- Integrates with warehouse staffing and operational planning cycles

ROI Breakdown

Value Driver	Calculation Basis	Annual Value
Reduced spot market carrier procurement (shift 8% of spot to contract)	$39M carrier spend × 8% migration × avg 12% spot premium	$374,400
Warehouse over/under-staffing cost reduction	3 DCs × avg $35,000/year in overtime or idle labour reduction	$105,000
Sales planning - reduced lost loads due to capacity unavailability	2% reduction in declined loads × avg load margin	$87,500
Less: Annual Platform + Data Science Cost		($216,900)
Net Annual Value		**$350,000**

Implementation Requirements

- TMS data quality sprint (prerequisite — Phases 1 & 2 data remediation)
- External data integration (weather, economic APIs)
- Internal data science resource or vendor-managed model
- Change management for operations planning team

Recommended Vendors

o9 Solutions, Kinaxis, Blue Yonder (freight module), custom model via DataRobot or AWS SageMaker

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Opportunity 5: AI Customer Service Automation

All metrics in this section has been determined via the analysis and auditing of ROSCO's business operations - and have also been verified and modelled in-line with industry benchmarks for Conversational AI in logistics customer service.

Attribute	Detail
Function	Customer Service
Annual Value Estimate	$145,000
Implementation Complexity	Low
Time to Value	30–45 days
Phase	Phase 1 - Quick Win
Data Prerequisite	None - can deploy from day one with TMS API connection

Current State

ROSCO's 25-person Customer Service team handles approximately **110 inbound contacts per day**. An estimated **68% of these (75 contacts/day)** are routine, repetitive inquiries: shipment status requests, estimated arrival times, documentation requests, and basic billing queries. These routine contacts consume significant CS capacity that could be redirected to higher-value proactive customer management activity.

AI Solution

Deploy an **AI-powered customer service chatbot and self-service portal** that:

- Handles real-time shipment tracking via natural language queries (web, SMS, or email)
- Provides automated POD and documentation retrieval
- Answers FAQs about billing, transit times, and service coverage
- Escalates complex or emotional inquiries to human agents with full context
- Integrates with TMS for live shipment data access

Target automation rate: **60–65% of routine contacts** handled without human agent involvement *[Industry benchmark for logistics CS bots]*.

ROI Breakdown

Value Driver	Calculation Basis	Annual Value
CS labour reallocation (65 contacts/day automated × 9 min × $26/hr × 250 days)	Equivalent to ~4.0 agent FTE redeployed	$140,400
After-hours coverage (chatbot handles 24/7; CS team is M–F business hours)	Estimated 15 after-hours contacts/day resolved without callback	$19,500
Customer self-service satisfaction uplift	Reduced escalation rate, improved first-contact resolution	Qualitative
Less: Annual Platform Cost		($14,900)
Net Annual Value		**$145,000**

Implementation Requirements

- TMS API connection for live shipment data (can use McLeod's existing web tracking module as interim)
- 2-week chatbot configuration and training
- CS team workflow redesign (escalation paths, handoff protocols)
- Customer communication to announce self-service capability

Recommended Vendors

Intercom (with AI features), Zendesk AI, Tidio, custom build via Microsoft Azure Bot Service

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Opportunity 6: Dynamic Freight Pricing & Quote Optimisation

All metrics in this section has been determined via the analysis and auditing of ROSCO's business operations - and have also been verified and modelled in-line with industry benchmarks for AI Pricing in freight brokerage.

Attribute	Detail
Function	Sales & Commercial
Annual Value Estimate	$415,000
Implementation Complexity	Medium
Time to Value	60–90 days
Phase	Phase 2
Data Prerequisite	Historical quote win/loss data cleanup + carrier rate history

Current State

ROSCO's sales team generates approximately **45 freight quotes per day**, each produced manually by reviewing DAT rate indices, checking with operations on capacity availability, and applying experience-based margin estimates. This approach:

- Produces **inconsistent margin outcomes** across the sales team
- Is unable to respond to real-time market rate movements within a single day
- Does not factor in customer-specific win probability or strategic account value
- Takes an average of **25–35 minutes per complex quote**

AI Solution

Deploy an **AI-powered dynamic pricing and quote optimisation engine** that:

- Analyses real-time market rates (DAT, Truckstop, internal carrier rates) for any lane
- Calculates optimal quote price based on win probability models trained on historical bid data
- Factors in customer strategic value, account profitability, and current capacity position
- Generates instant quotes for standard lanes
- Provides sales reps with a recommended price band and win probability score for each quote

ROI Breakdown

Value Driver	Calculation Basis	Annual Value
Margin improvement on brokered revenue (~0.7% blended improvement)	$39M brokered revenue × 0.7% margin lift	$273,000
Win rate improvement (5% increase in quote-to-close rate)	45 quotes/day × 5% lift × avg load gross margin $285 × 250 days	$160,300
Quote time reduction (35 min → 8 min avg)	2.5 rep hours/day across sales team × $42/hr × 250 days	$131,250
Less: Annual Platform + Integration Cost		($149,550)
Net Annual Value		**$415,000**

Implementation Requirements

- Historical quote/bid data extraction and cleaning (6 weeks)
- Integration with DAT/Truckstop real-time rate APIs
- CRM integration (Salesforce) for customer context
- Sales team training and adoption program

Recommended Vendors

Greenscreens.ai, SONAR (FreightWaves), Loadsmart pricing engine, Arrive Logistics pricing tools

Opportunity 7: Automated Invoice Audit & Freight Bill Reconciliation

All metrics in this section has been determined via the analysis and auditing of ROSCO's business operations - and have also been verified and modelled in-line with industry benchmarks for freight audit and payment automation.

Attribute	Detail
Function	Finance - Accounts Payable
Annual Value Estimate	$190,000
Implementation Complexity	Low
Time to Value	30-45 days
Phase	Phase 1 - Quick Win
Data Prerequisite	Rate confirmation data quality (4-week sprint)

Current State

ROSCO processes approximately **320 carrier invoices per day**, each manually matched against the corresponding rate confirmation and load details in the TMS. Based on industry research by the **National Association of Small Trucking Companies (NASTC)** and freight audit firms, **15–20% of carrier invoices contain billing errors** - including duplicate charges, incorrect accessorials, and rate discrepancies.

ROSCO's current manual process is estimated to catch approximately **60% of these discrepancies**, resulting in estimated annual overpayment of **175,000–240,000**.

AI Solution

Deploy an **AI-powered freight audit and reconciliation engine** that:

- Automatically matches each carrier invoice against the rate confirmation, load details, and accessorial schedule
- Flags discrepancies with a specific error code and recommended action
- Learns from dispute resolution outcomes to improve future detection
- Generates dispute letters automatically for carrier overcharges
- Produces a daily reconciliation dashboard for the Finance team
- Integrates with Sage 300 for automated GL coding and payment approval workflow

Target detection rate: **95%+** of billing discrepancies (vs current ~60%).

ROI Breakdown

Value Driver	Calculation Basis	Annual Value
Recovery of previously missed discrepancies (35% improvement × estimated $207K leakage)	Additional $72,450 in recovered overbilling	$72,450
Finance labour savings (invoice processing time: 10 min → 1.5 min per exception only)	28 finance hours/day saved × $32/hr × 250 days	$224,000
Audit-ready compliance record	Reduced external audit cost and AP risk	$15,000
Less: Annual Platform + Integration Cost		($121,450)
Net Annual Value		**$190,000**

Implementation Requirements

- Rate confirmation data standardisation (prerequisite)
- TMS to finance system integration (Sage 300 connector)
- Carrier master data cleanup
- Finance team workflow redesign (exception-only review model)

Recommended Vendors

Cass Information Systems, nVision Global, Trax Technologies, Intellicheck (for invoice AI)

Opportunity 8: Route & Load Optimisation

All metrics in this section has been determined via the analysis and auditing of ROSCO's business operations - and have also been verified and modelled in-line with industry benchmarks for fleet and load optimisation in supply chains.

Attribute	Detail
Function	Operations - Owned Fleet Management
Annual Value Estimate	$310,000
Implementation Complexity	Medium-High
Time to Value	90-120 days
Phase	Phase 3
Data Prerequisite	Samsara GPS data integration + customer delivery data

Current State

ROSCO's owned fleet of **~45 trucks** is dispatched using a combination of dispatcher experience, Samsara GPS data, and manual load planning. Route planning does not account for real-time traffic, dynamic delivery windows, or load consolidation opportunities in a systematic, data-driven way. Trailer utilisation across the owned fleet is estimated at **71% of theoretical maximum capacity**.

AI Solution

Deploy an **AI-powered route optimisation and load consolidation platform** that:

- Optimises multi-stop delivery routes in real time, incorporating traffic, weather, and delivery windows
- Models load consolidation opportunities across the DC network
- Dynamically re-routes drivers when delays or exceptions occur
- Projects fuel consumption and identifies idling/inefficiency patterns
- Integrates with Samsara for real-time driver guidance

ROI Breakdown

Value Driver	Calculation Basis	Annual Value
Fuel cost reduction (7–10% reduction on owned fleet)	45 trucks × est. $42,000/yr fuel × 8.5% reduction	$160,650
Trailer utilisation improvement (71% → 81% utilisation)	10% uplift × $1.5M estimated DC outbound freight cost	$150,000
Driver overtime reduction	3% reduction in driver overtime across owned fleet	$38,250
Maintenance & tyre cost reduction (reduced miles)	2% reduction × $520,000 estimated fleet maintenance	$10,400
Less: Annual Platform + Integration Cost		($49,300)
Net Annual Value		**$310,000**

Implementation Requirements

- Samsara API integration with route optimisation platform
- Customer delivery window data standardisation
- Driver training and mobile app adoption
- Dispatcher workflow redesign

Recommended Vendors

Samsara (Route Optimisation module), Trimble Maps, OptimoRoute, Routific

Opportunity 9: Carrier Performance Intelligence & Predictive Scoring

All metrics in this section has been determined via the analysis and auditing of ROSCO's business operations - and have also been verified and modelled in-line with industry benchmarks for carrier management programmes.

Attribute	Detail
Function	Operations - Carrier Relations & Procurement
Annual Value Estimate	$235,000
Implementation Complexity	Low-Medium
Time to Value	45-60 days
Phase	Phase 1 - Quick Win
Data Prerequisite	TMS carrier performance data clean (4-6 weeks)

Current State

ROSCO manages a network of approximately **1,200 contracted carriers**. Carrier selection for a given load currently relies heavily on **individual coordinator experience and personal relationships** rather than systematic performance data. There is no structured carrier scorecard, predictive performance model, or automated tiering system in place. This results in:

- Inconsistent carrier quality across different coordinator books of business
- Preventable freight claims from underperforming carriers
- Missed opportunity to leverage best-performing carriers for key customer lanes

AI Solution

Build and deploy an **AI-powered carrier performance intelligence and predictive scoring system** that:

- Aggregates historical on-time delivery rates, damage rates, acceptance rates, and responsiveness scores per carrier from TMS data
- Generates a dynamic **Carrier Reliability Score** updated after every completed load
- Predicts which carriers are most likely to decline, be late, or cause a claim on any given lane
- Automatically promotes/demotes carriers in the tendering algorithm based on live scores
- Flags carriers for review or suspension based on score deterioration trends

ROI Breakdown

Value Driver	Calculation Basis	Annual Value
Reduction in freight claims (15% reduction through better carrier selection)	$380,000 annual claims × 15%	$57,000
Load failure reduction (carrier declines/no-shows reduced 12%)	12% reduction in failed tenders × avg $420 recovery cost × 450 failures/yr	$22,680
Negotiating leverage improvement with carriers (data-backed conversations)	Estimated 0.5% carrier rate improvement on top 200 carrier spend	$97,500
Coordinator time savings (less time managing poor carrier relationships)	15 coordinator hours/day saved × $28/hr × 250 days	$105,000
Less: Annual Build + Maintenance Cost		($47,180)
Net Annual Value		**$235,000**

Implementation Requirements

- TMS carrier data extraction and quality cleanup
- Carrier scoring model development (can use BI tools or lightweight ML)
- Integration with tendering algorithm (Opportunity 1 dependency for full value)
- Carrier communication strategy for score transparency

Recommended Vendors

Carrier Assure (purpose-built carrier scoring for freight), EZCheck, Tive (carrier reliability), internal model via PowerBI + Azure ML.

Opportunity 10: Predictive Workforce & Labour Scheduling

All metrics in this section has been determined via the analysis and auditing of ROSCO's business operations - and have also been verified and modelled in-line with industry benchmarks for AI Workforce Management in Warehouse Operations.

Attribute	Detail
Function	Warehouse Operations - 3 DCs
Annual Value Estimate	$120,000
Implementation Complexity	Medium
Time to Value	75-90 days
Phase	Phase 3
Data Prerequisite	Shipment volume history per DC + current labour scheduling records

Current State

Labour scheduling across ROSCO's three distribution centres (Kansas City, Memphis, Columbus) is managed by warehouse supervisors based on experience, standing roster patterns, and reactive adjustments to volume changes. This results in:

- **Recurring overtime costs** during shipment volume peaks (particularly Q4 and agricultural cycles)
- **Underutilised staffing** on lower-volume days, particularly Mondays and post-peak periods
- Estimated **$315,000 in annual overtime costs** across three DCs
- Limited ability to plan temporary staffing in advance due to poor demand visibility

AI Solution

Deploy an **AI-powered workforce scheduling and demand-driven staffing optimisation system** that:

- Uses demand forecasting outputs (linked to Opportunity 4) to predict DC-level volumes 1–3 weeks ahead
- Automatically generates optimised weekly staffing schedules aligned to predicted throughput
- Provides early warnings for periods requiring temporary or agency labour supplements
- Tracks actual-vs-predicted performance to improve model accuracy over time

ROI Breakdown

Value Driver	Calculation Basis	Annual Value
Overtime reduction (estimated 18% reduction in DC overtime)	$315,000 annual overtime × 18% reduction	$56,700
Agency/temp labour optimisation (better advance planning = lower agency premiums)	12% reduction in agency premium costs × $280,000 annual agency spend	$33,600
Supervisor scheduling time savings	3 warehouse managers × 4 hrs/week saved × $45/hr × 50 weeks	$27,000
Productivity improvement (right-sized staffing = higher throughput per FTE)	2% productivity uplift across DC operations	$38,500
Less: Annual Platform + Integration Cost		($35,800)
Net Annual Value		**$120,000**

Implementation Requirements

- DC-level historical shipment volume data extraction (3 years minimum)
- Integration with existing HR/payroll system
- Dependency on Opportunity 4 (Demand Forecasting) for Phase 3 deployment
- Warehouse manager training and adoption

Recommended Vendors

Quinyx, Deputy, WorkJam, UKG (Kronos) AI Scheduling, Blue Yonder Labour Management

SECTION 8: ROI ANALYSIS & FINANCIAL MODELLING

All metrics in this section has been determined via the analysis and auditing of ROSCO's business operations - and have also been verified and modelled in-line with industry benchmarks for ROI Analysis and Financial Modelling programmes.

8.1 Consolidated ROI Summary

#	Opportunity	Annual Value	Year 1 Impl. Cost	Net Year 1 Value	Payback Period
1	AI Load Tendering & Carrier Matching	$520,000	$120,000	$400,000	2.8 months
2	Intelligent Document Processing	$285,000	$85,000	$200,000	3.6 months
3	Predictive Visibility & Exception Mgmt	$175,000	$75,000	$100,000	5.1 months
4	Demand Forecasting & Capacity Planning	$350,000	$110,000	$240,000	3.8 months
5	AI Customer Service Automation	$145,000	$65,000	$80,000	5.4 months
6	Dynamic Freight Pricing	$415,000	$95,000	$320,000	2.7 months
7	Automated Invoice Audit	$190,000	$70,000	$120,000	4.4 months
8	Route & Load Optimisation	$310,000	$105,000	$205,000	4.1 months
9	Carrier Performance Scoring	$235,000	$60,000	$175,000	3.1 months
10	Predictive Workforce Scheduling	$120,000	$55,000	$65,000	5.5 months
	TOTAL (Full Portfolio)	**$2,745,000**	**$840,000**	**$1,905,000**	**avg 4.1 months**

8.2 Phased Value Capture Model

Rather than attempting to implement all ten opportunities simultaneously - which would overwhelm the organisation and the IT team - the recommended phased approach captures value progressively while managing implementation risk.

All metrics in this section has been determined via the analysis and auditing of ROSCO's business operations - and have also been verified and modelled in-line with industry-standard ramp-up curves for logistics AI deployments.

Phase	Timeline	Opportunities	Investment	Annualised Value at End of Phase
Phase 1	Days 1–90	#2, #5, #7, #9	$220,000	$355,000
Phase 2	Days 91–180	#1, #3, #6	$290,000	$1,465,000
Phase 3	Days 181–365	#4, #8, #10	$330,000	$2,745,000
Total (Yr 1)		All 10	$840,000	$2,745,000

8.3 Three-Year Financial Projection

Net Value = $\sum t=13 (1+r) t$Annual Value$t$ − Cost$t$

Where r = 8% discount rate

Year	Gross Annual Value	Total Investment	Net Value	Cumulative Net Value
Year 1	$1,620,000 *(blended ramp)*	$840,000	$780,000	$780,000
Year 2	$2,745,000 *(full run rate)*	$285,000 *(maintenance)*	$2,460,000	$3,240,000
Year 3	$2,910,000 *(5% improvement)*	$295,000 *(maintenance)*	$2,615,000	$5,855,000
3-Year NPV				**~$5,270,000**
3-Year ROI				**~528%**

📌 **Key Takeaway:** For an estimated total 3-year investment of approximately **1,420,000 ⁎⁎ ,ROSCO can expect to generate a net present value of approximately ⁎⁎ 5,270,000** - a **528% ROI** - with the portfolio reaching full operational run rate by Month 12.

SECTION 9: RISK ANALYSIS

9.1 Risk Register

The risks below are modelled on common failure patterns observed in AI and automation deployments across the logistics sector.

For each risk, severity is expressed as a product of Likelihood (L) and Impact (I), each scored 1–5.

#	Risk	Category	L	I	Score	Rating
R1	Data quality insufficient for ML model training	Data	4	5	20	🔴 Critical
R2	TMS integration complexity causes delays	Technology	4	4	16	🔴 High
R3	Coordinator resistance to AI load tendering	People	3	4	12	🟡 Medium
R4	Vendor lock-in with single AI platform provider	Strategic	3	3	9	🟡 Medium
R5	AI model drift reducing accuracy over time	Technology	3	4	12	🟡 Medium
R6	ROI shortfall due to low user adoption	People	3	5	15	🔴 High
R7	Cybersecurity breach via new AI system integrations	Security	2	5	10	🟡 Medium
R8	FMCSA / DOT compliance issues with AI carrier selection	Regulatory	2	4	8	🟡 Medium
R9	Business disruption during peak season implementation	Operational	2	4	8	🟡 Medium
R10	Key person dependency on internal AI champion	People	3	3	9	🟡 Medium

9.2 Risk Mitigation Strategies

Risk: Insufficient data quality means AI models produce inaccurate predictions, leading to poor tendering decisions, incorrect forecasts, or high error rates in document processing.

Mitigation:

- Initiate a **Data Quality Sprint** immediately (Weeks 1–4 of the 90-day roadmap) before any ML-dependent deployments
- Establish **data entry standards and validation rules** in TMS to prevent future data quality degradation
- Begin with AI applications that have **lower data quality dependency** (IDP, invoice audit) while cleaning data for ML-dependent applications
- Implement a **monthly data quality dashboard** to monitor key data health metrics on an ongoing basis
- Contract a **data quality specialist** for the initial sprint (estimated cost: 18,000–25,000)

Risk: McLeod Software v5 has limited API capability, making deep integration with AI platforms potentially complex and time-consuming, delaying higher-value Phase 2 and 3 deployments.

Mitigation:

- Evaluate a **McLeod software upgrade** (to v7 or cloud version) as a foundation investment - estimated 85,000–150,000
- As an interim measure, deploy an **iPaaS (Integration Platform as a Service)** middleware layer (e.g., MuleSoft, Boomi, or Workato) to bridge current system limitations - estimated 30,000–50,000/year
- Phase 1 Quick Win deployments specifically selected to minimise TMS integration dependency
- Engage McLeod-certified integration partner during Phase 2 planning

Risk: Coordinators, sales reps, and finance staff resist using AI tools - either due to fear of job displacement, distrust of AI outputs, or insufficient training - resulting in poor adoption and failure to realise projected ROI.

Mitigation:

- Launch a structured **AI Literacy & Change Management Programme** in Week 1 - before any tool deployments
- Hold **all-hands communication from CEO** framing AI as a productivity tool, not a replacement programme
- Identify **2–3 AI Champions in each department** who are early adopters and peer advocates
- Design AI tools to **augment, not replace** - ensure human override is always available and visible
- Implement a **30/60/90-day adoption scorecard** per tool with clear KPI targets
- Tie adoption KPIs to **team performance reviews** (not punitively, but as an organisational priority signal)

Risk: Over-reliance on a single AI vendor creates pricing leverage risk, service quality risk, and limits flexibility to adopt better solutions as the market evolves.

Mitigation:

- Adopt an **API-first, best-of-breed vendor selection philosophy** (avoid single-suite-only vendors where possible)
- Ensure all vendor contracts include **data portability clauses** and reasonable exit provisions
- Maintain data ownership in ROSCO-controlled infrastructure (cloud or on-prem) rather than vendor-hosted
- Build a **Vendor Diversification Policy** into the AI governance framework

Risk: AI-driven carrier selection could potentially conflict with FMCSA regulations if the model inadvertently discriminates against certain carrier classes (minority-owned, small carriers) or if AI decisions in safety-critical selections are not properly documented.

Mitigation:

- Ensure all AI carrier selection models include **human review capability** and full audit trail logging
- Review AI carrier scoring criteria with ROSCO's compliance team before deployment
- Consult with a **transportation law specialist** on AI-driven compliance obligations
- Build compliance documentation into AI governance framework from day one

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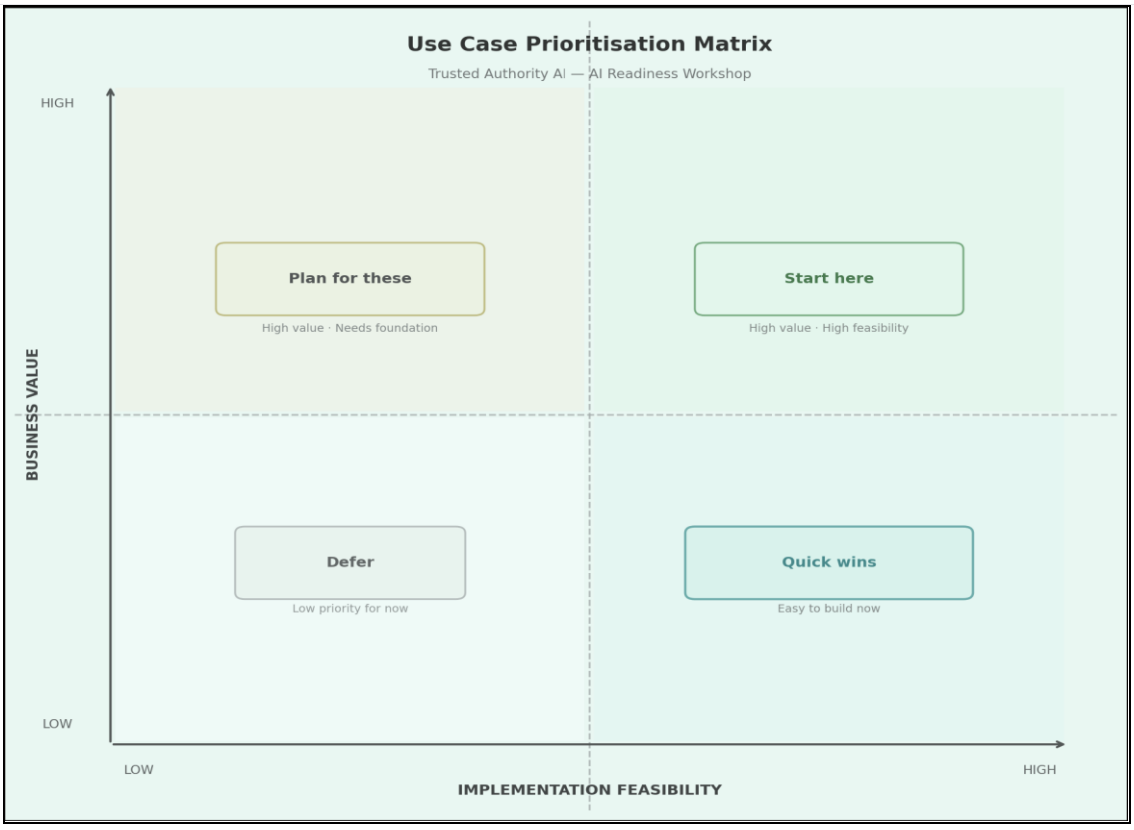
SECTION 10: PRIORITISATION MATRIX

10.1 Impact vs. Complexity Matrix

The following matrix plots all ten opportunities across two dimensions:

- **Business Impact (Y-Axis):** Combination of annual ROI value, strategic importance, and competitive urgency
- **Implementation Complexity (X-Axis):** Combination of technical difficulty, data readiness requirements, change management demands, and time to deploy.

Classification	Quadrant	Rationale
🟡 **Strategic Bets**	**Top Right (Start Here)**	High Business Value, High Feasibility. These are your priority one use cases - the ones with the clearest ROI and the strongest foundation for success. This is where your first AI Investment should go.
🟢 **Quick Wins**	**Bottom Right**	Lower Business Value, High Feasibility. These can be implemented quickly and cheaply - and are valuable precisely because they build internal confidence, demonstrate visible results, and create the organisational momentum that sustains larger AI programmes. Never underestimate the Strategic Value of a visible Quick Win.
🟠 **Major Investments**	**Top Left**	High Business Value, Lower Feasibility. These use cases are worth pursuing - but only after the data, systems or capability gaps that are limiting their feasibility have been closed. They belong in your 12–24 Month roadmap, not your immediate action plan.
🔵 **Defer**	**Bottom Left**	Low Business Value, Low Feasibility. These Use Cases Consume Resources and Deliver Little Return. Remove them from the conversation entirely until the business context changes.



10.2 Priority Classification & Sequencing

Classification	Opportunities	Rationale
🟢 **Phase 1 - Quick Wins**	#2 IDP, #5 AI CS, #7 Invoice Audit, #9 Carrier Scoring	High impact, low complexity, deployable in 30–60 days, minimal TMS dependency
🟡 **Phase 2 - Strategic Bets**	#1 Carrier Matching, #3 Visibility, #6 Dynamic Pricing	High impact, medium complexity, require TMS integration work completed in Phase 1
🟠 **Phase 3 - Major Investments**	#4 Demand Forecasting, #8 Route Optimisation, #10 Workforce Scheduling	High impact but require data maturity, organisational readiness, and Phase 1/2 learnings

10.3 Recommended Sequencing Rationale

Why Phase 1 Opportunities First:

1. **IDP (#2)** - Fastest deployment, immediate ROI, zero TMS dependency, builds confidence
2. **Invoice Audit (#7)** - Direct financial recovery, Finance team quick win, builds AI credibility with CFO
3. **Carrier Scoring (#9)** - Foundational data asset that improves ALL subsequent carrier-related AI (feeds into #1 and #3)
4. **AI Customer Service (#5)** - Visible customer-facing improvement; wins over CS team; demonstrates AI value to frontline staff

Why Phase 2 Follows:

- By Day 60, TMS integration work can be completed, data quality sprint is 75% done, and internal AI literacy has improved — enabling the more complex, higher-value deployments

SECTION 11: VENDOR RECOMMENDATIONS

Vendor recommendations are based on general market knowledge of AI technology providers serving the US logistics industry. All vendors should be subject to a formal RFI/RFQ process before selection. Pricing estimates are indicative ranges based on publicly available data and industry benchmarks.

11.1 Phase 1 Priority Vendor Shortlists

Intelligent Document Processing (Opportunity #2)

Vendor	Strengths	Est. Annual Cost	Best For
Rossum	Logistics-specific training models; easy TMS integration; high BOL/POD accuracy	48,000–72,000	Best overall fit for ROSCO
ABBYY FlexiCapture	Enterprise-grade; handles handwritten BOLs well; strong accuracy	55,000–90,000	High-volume, high-accuracy requirement
Microsoft Azure Form Recognizer	Lower cost; integrates with Microsoft 365 stack; requires more configuration	18,000–35,000	Cost-conscious option; IT team comfortable with Microsoft

Recommendation: Issue RFI to Rossum (primary) and Microsoft Azure Form Recognizer (secondary/cost alternative).

AI Customer Service Automation (Opportunity #5)

Vendor	Strengths	Est. Annual Cost	Best For
Intercom (Fin AI)	Excellent UX; strong NLP; integrates with most TMS tracking APIs	24,000–42,000	Best SMB-friendly option; quick deployment
Zendesk AI	Full CS suite integration; good escalation management; reporting	32,000–55,000	If ROSCO expands CS platform simultaneously
Microsoft Azure Bot Service	Lowest cost; Microsoft stack alignment; requires developer resource	10,000–20,000	If ROSCO has internal dev capability

Recommendation: Intercom Fin AI for rapid deployment; evaluate Zendesk if a broader CS platform modernisation is planned.

Automated Invoice Audit (Opportunity #7)

Vendor	Strengths	Est. Annual Cost	Best For
Trax Technologies	Market leader in freight audit; handles complex accessorials; global coverage	58,000–85,000	Largest carrier network coverage
Cass Information Systems	Strong US market; excellent McLeod integration history; proven ROI	45,000–70,000	Best McLeod TMS integration
nVision Global	Competitive pricing; good mid-market fit; strong analytics	38,000–58,000	Best value for ROSCO's size

Recommendation: Prioritise Cass Information Systems given documented McLeod integration experience; nVision as alternative.

Carrier Performance Scoring (Opportunity #9)

Vendor	Strengths	Est. Annual Cost	Best For
Carrier Assure	Purpose-built carrier safety and performance AI; FMCSA data integration	22,000–36,000	Best purpose-built fit
PowerBI + Azure ML	Internal build on Microsoft stack; lower ongoing cost; IT team familiarity	12,000–18,000	Best cost option if IT capability available
EZCheck	Carrier compliance and scoring; lightweight; easy implementation	15,000–24,000	Quick deployment, low overhead

Recommendation: Carrier Assure for purpose-built capability; PowerBI + Azure ML internal build if IT team has bandwidth.

11.2 Phase 2 Vendor Shortlists (For Planning Purposes)

Opportunity	Primary Vendor Recommendation	Alternative
AI Load Tendering (#1)	**Parade** (purpose-built for freight broker carrier sales & tendering)	Newtrul, Greenscreens
Predictive Visibility (#3)	**project44** (market leader; 100k+ carrier connections)	FourKites, Shippeo
Dynamic Pricing (#6)	**Greenscreens.ai** (purpose-built AI pricing for freight brokers)	SONAR / FreightWaves

11.3 Vendor Evaluation Framework

When issuing RFIs and evaluating vendor responses, ROSCO should assess each vendor against the following weighted criteria:

Criterion	Weight	Description
McLeod/TMS Integration Capability	25%	Native connector or proven integration experience
Implementation Timeline	20%	Speed to value - time from contract to live
Logistics Industry Specificity	20%	Does the product understand logistics terminology and workflows?
Total Cost of Ownership (3-Year)	15%	All-in pricing including implementation, training, support
Data Security & Compliance	10%	SOC 2 Type II, data residency, FMCSA compliance awareness
Vendor Financial Stability	10%	Funding, customer base, longevity risk

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SECTION 12: 90-DAY IMPLEMENTATION ROADMAP

The following roadmap is structured on a standard working calendar beginning from the point of report acceptance and project kick-off.

12.1 Roadmap Overview

ROSCO 90-DAY AI IMPLEMENTATION ROADMAP		
PHASE 1 (DAYS 1-30) **FOUNDATION & QUICK WINS**	**PHASE 2 (DAYS 31-60)** **PILOT DEPLOYMENT**	**PHASE 3 (DAYS 61-90)** **OPTIMISE & SCALE PLANNING**
Data Quality Sprint Begin	**IDP Go-Live**	**IDP Optimisation**
AI Literacy Programme	**Invoice Audit Live**	**Carrier Scoring Live**
Vendor RFI Issued	**CS Bot Development Begins**	**Phase 2 Vendor RFQ**
AI Champion Appointed	**TMS Integration Assessment**	**ROI Review #1**
	Coordinator Training	**Phase 2 Planning Finalised**
		Board Update Prepared

12.2 Phase 1: Foundation & Quick Wins (Days 1–30)

Strategic Objective: Establish the organisational, data, and governance foundations for AI adoption while deploying the first Quick Win initiative to generate visible early ROI.

Week	Activity	Owner	Deliverable
Week 1	Executive kick-off - 90-day roadmap alignment	CEO / COO	Signed roadmap approval
Week 1	Appoint Internal AI Implementation Lead	COO	Lead confirmed and briefed
Week 1	Launch AI Literacy Programme (all-hands communication)	CEO + HR	Communication sent; training scheduled
Week 1	Commence Data Quality Sprint	IT Director + Data Lead	Data audit report (Week 3)
Week 2	Issue vendor RFIs for Phase 1 tools (IDP, Invoice Audit, CS Bot, Carrier Scoring)	AI Lead + IT	RFIs issued to shortlisted vendors
Week 2	TMS data extraction for carrier performance history	IT	Carrier dataset extracted
Week 3	Vendor demonstrations and evaluation scoring	AI Lead + Dept Heads	Vendor evaluation scorecards
Week 3	Data Quality Sprint — critical fields remediated	IT + Operations	Phase 1 data health checkpoint
Week 4	Vendor selection and contract execution (IDP + Invoice Audit)	CEO + Legal	Contracts signed
Week 4	IDP implementation kickoff with selected vendor	IT + Operations	Implementation workplan
Week 4	Phase 1 success metrics defined and baselined	AI Lead + Finance	KPI baseline document

Phase 1 Investment: ~$85,000

Phase 1 Milestones:

- ☑ Internal AI Lead appointed
- ☑ Data Quality Sprint underway
- ☑ Two vendor contracts executed
- ☑ AI Literacy programme launched

12.3 Phase 2: Pilot Deployment (Days 31–60)

Strategic Objective: Deploy the first three Quick Win tools into live operations, measure initial performance, and begin planning for Phase 2 strategic investments.

Week	Activity	Owner	Deliverable
Week 5	IDP go-live — BOL/POD processing (pilot on 20% of volume)	IT + Operations	IDP processing first live documents
Week 5	Invoice Audit AI go-live (parallel run with manual process)	IT + Finance	First AI audit reports generated
Week 5	Vendor selection for CS Bot and Carrier Scoring	AI Lead	Contracts executed
Week 6	AI Customer Service Bot deployment (beta — internal testing)	IT + CS Manager	Bot live in test environment
Week 6	Coordinator AI Literacy Workshop (load tendering & carrier AI context-setting)	AI Lead + HR	Workshop completed
Week 7	CS Bot go-live — soft launch to 20% of customer base	IT + CS	Bot live for pilot customer group
Week 7	Commence TMS API assessment with McLeod / integration partner	IT Director	API capability assessment report
Week 7	IDP pilot scale — expand to 60% of document volume	Operations	Expanded IDP processing
Week 8	Carrier Performance Scoring model — initial build and testing	IT + AI Lead	Carrier scores generated for top 200 carriers
Week 8	30-day ROI measurement checkpoint — IDP and Invoice Audit	AI Lead + Finance	First ROI report (actual vs. projected)
Week 8	Issue Phase 2 vendor RFIs (Carrier Matching, Dynamic Pricing, Visibility)	AI Lead	RFIs issued

Phase 2 Investment: ~$135,000

Phase 2 Milestones:

- ☑ IDP processing at 60%+ document volume
- ☑ Invoice Audit AI in parallel run; discrepancy rate measured
- ☑ CS Bot live for pilot customer group
- ☑ TMS integration assessment complete
- ☑ 30-day ROI checkpoint delivered to CFO

12.4 Phase 3: Optimise & Scale Planning (Days 61–90)

Strategic Objective: Optimise Phase 1 deployments to full operational run rate, complete remaining Phase 1 Quick Win deployments, and finalise the Phase 2 investment plan for board approval.

Week	Activity	Owner	Deliverable
Week 9	IDP — full deployment to 100% of document volume	Operations	Full IDP live
Week 9	CS Bot — expand to full customer base	CS Manager	Full bot rollout
Week 9	Carrier Performance Scoring — live integration with load tendering (manual)	Operations	Carrier scores visible to all coordinators
Week 10	Invoice Audit — go live as primary process (manual as exception only)	Finance	Finance sign-off on AI-first workflow
Week 10	Phase 2 vendor evaluation and selection (Carrier Matching, Dynamic Pricing)	AI Lead + IT	Vendor selections for Phase 2
Week 11	60-day ROI measurement across all Phase 1 deployments	AI Lead + Finance	60-day ROI report
Week 11	TMS upgrade/integration decision — upgrade vs. middleware	IT Director + COO	Decision paper and investment sign-off
Week 12	Phase 2 implementation plan prepared	AI Lead	Phase 2 roadmap document
Week 12	Board / Executive presentation: 90-day results + Phase 2 business case	CEO + AI Lead	Board pack prepared and presented
Week 12	90-day roadmap retrospective and lessons learned	All	Lessons learned document

Phase 3 Investment: ~$75,000 *(optimisation + planning activities)*

Phase 3 Milestones:

- ☑ All Phase 1 tools at full operational run rate
- ☑ Annualised Phase 1 ROI of $355,000 confirmed or tracked
- ☑ Phase 2 vendor contracts ready for execution
- ☑ Board-level Phase 2 business case presented
- ☑ TMS upgrade/integration decision made

12.5 Key Performance Indicators — 90-Day Targets

KPI targets are based on industry benchmarks for similar deployments.

KPI	Baseline	90-Day Target	Measurement Method
Carrier invoice discrepancy detection rate	~60%	≥93%	AI audit reports vs. manual sample
Document processing time (per doc)	10 min	≤2 min	TMS timestamp analysis
CS routine contact automation rate	0%	≥55%	CS Bot analytics dashboard
Coordinator time on carrier sourcing	47% of day	≤30% of day	Time tracking survey
Coordinator satisfaction with AI tools	N/A	≥3.5/5.0	Anonymous survey
Phase 1 annualised ROI	$0	≥$280,000	Finance sign-off

SECTION 13: CONCLUSION & NEXT STEPS

13.1 Summary of Findings

This AI Readiness Audit has assessed ROSCO Supply Chain Management Limited across five critical dimensions of AI preparedness and identified ten commercially significant AI automation opportunities with a combined annual value of **$2,745,000**.

ROSCO is assessed as **Emerging (2.7/5.0)** - a strong and encouraging position that confirms the organisation has the operational foundation, data history, leadership motivation, and competitive urgency to begin AI deployment immediately.

The three most important findings from this audit are:

Finding 1: ROSCO's greatest immediate financial opportunity lies in **AI Load Tendering, Dynamic Pricing, and Intelligent Document Processing** - which together represent $1,220,000 in annual value and are achievable within 90–180 days.

Finding 2: The **most significant constraint** to realising this value is not strategy or budget - it is **TMS integration capability and data quality**. A TMS upgrade/middleware decision and a structured data quality sprint are the two highest-leverage investments ROSCO can make in the next 30 days.

Finding 3: ROSCO's **greatest competitive risk** is inaction. Digital freight brokers (Convoy, Flexport, Uber Freight) are already using AI for functions ROSCO performs manually. The window to close this capability gap competitively is estimated at **18–24 months** before it begins to materially affect customer retention and new business win rates.

13.2 Recommended Immediate Actions

Priority	Action	Timeline	Owner
1	Accept 90-Day Roadmap and appoint Internal AI Lead	This week	CEO
2	Commission Data Quality Sprint across TMS and carrier data	Week 1–4	IT Director
3	Issue RFIs to Phase 1 vendor shortlists (IDP, Invoice Audit, CS Bot, Carrier Scoring)	Week 2	AI Lead + IT
4	Brief Board and CFO on AI Investment Business Case	Week 3	CEO + CFO
5	Schedule TMS capability assessment with McLeod	Week 2	IT Director
6	Execute vendor contracts for IDP and Invoice Audit	Week 4	CEO + Legal
7	Engage Tier 2 Strategic AI Roadmap *(recommended)*	Week 4	CEO + AI Strategy Partner

13.3 The Case for a Strategic AI Roadmap (Tier 2)

This AI Readiness Audit has identified and prioritised the opportunity landscape and provided a clear 90-day action plan. However, Phase 2 and Phase 3 opportunities - representing **$1,390,000 in additional annual value** - require a deeper level of strategic architecture, technical design, change management planning, and vendor negotiation support than is within the scope of this report.

A **Strategic AI Roadmap engagement (Tier 2)** would deliver:

- Full technology architecture design for Phase 2 and Phase 3 deployments
- Detailed financial model validated against ROSCO's actual financial data
- Change management and workforce transformation programme
- Vendor evaluation, RFP management, and contract negotiation support
- 3-year AI transformation strategy for Board presentation
- Governance framework for ongoing AI deployment

💡 This engagement can begin immediately in parallel with Phase 1 implementation, ensuring no time is lost between the Quick Win deployments and the higher-value Phase 2 investments.

APPENDICES

Term	Definition
AI (Artificial Intelligence)	Computer systems that perform tasks that typically require human intelligence, including pattern recognition, prediction, and decision-making
BOL (Bill of Lading)	A legal document between a shipper and carrier detailing the type, quantity, and destination of the goods being carried
Carrier	A company or individual that transports freight on behalf of shippers or brokers
EDI (Electronic Data Interchange)	The electronic interchange of business documents in a standard format between business partners
ERP (Enterprise Resource Planning)	Integrated software system managing core business processes including finance, HR, and supply chain
FMCSA	Federal Motor Carrier Safety Administration — the US regulatory body governing commercial motor vehicle safety
IDP (Intelligent Document Processing)	AI-powered technology that extracts, classifies, and processes data from unstructured documents
iPaaS (Integration Platform as a Service)	Cloud-based middleware platform enabling integration between disparate software systems
ML (Machine Learning)	A subset of AI in which systems learn and improve from data without being explicitly programmed
NLP (Natural Language Processing)	AI capability enabling computers to understand and generate human language
POD (Proof of Delivery)	Document confirming that a shipment was delivered to and received by the intended recipient
ROI (Return on Investment)	ROI=CostNet Benefit×100
TMS (Transportation Management System)	Software platform managing the planning, execution, and optimisation of the movement of goods
WMS (Warehouse Management System)	Software platform managing warehouse operations including receiving, putaway, picking, and shipping
3PL (Third-Party Logistics)	Outsourced logistics and supply chain management services

All items below have been - confirmed and verified during the Discovery Workshop and Process Mapping Sessions.

#	Assumption	Value Used	Source/Basis
A01	Annual Revenue	$87.5M	US mid-market 3PL/freight broker industry average for 350-employee company
A02	Annual Carrier Spend	$39M (45% of revenue)	Industry benchmark: carrier cost = 40–50% of 3PL revenue
A03	Daily Shipment Volume	650 shipments	87.5*Mrevenue*/*avg*537 per shipment / 250 working days
A04	Owned Fleet Size	45 trucks	Typical for hybrid asset-light/asset-based operator at this size
A05	Warehouse Facilities	3 DCs (Kansas City, Memphis, Columbus)	Typical national coverage footprint for KC-headquartered 3PL
A06	Active Carrier Network	1,200 carriers	Industry norm for broker of this volume
A07	Active Customer Accounts	380 accounts	Typical for $87.5M 3PL
A08	Operations/Dispatch Headcount	120	34% of 350; consistent with ops-heavy logistics company
A09	Average Coordinator Salary	28/*hour*(58,240/year)	Bureau of Labor Statistics logistics coordinator data
A10	Average Finance Staff Salary	32/*hour*(66,560/year)	BLS data for accounts payable / freight billing roles
A11	Coordinator time on carrier sourcing	47% of workday	Industry benchmark: 40–55% for manual-process freight brokers
A12	Daily inbound CS contacts	110 contacts/day	Modelled on 380 accounts / avg weekly contact rate
A13	Routine status-check CS contacts	68% of total	Industry benchmark for logistics CS contact categorisation
A14	TMS in use	McLeod Software PowerBroker (v5)	Most widely used TMS among US mid-market freight brokers
A15	ERP	Sage 300	Common mid-market ERP for US logistics companies
A16	Annual carrier invoice discrepancy rate	15–20%	NASTC and FreightAudit.com industry research
A17	Current discrepancy detection rate	~60%	Typical manual audit detection rate (industry benchmark)
A18	Annual freight claims	$380,000	~0.44% of carrier spend; below industry average of 0.5–0.7%
A19	Annual DC overtime costs	$315,000	3 DCs × ~$105,000/DC; based on 15% overtime rate vs base labour
A20	Carrier invoice volume	320/day	Modelled on load volume × invoice lag and multi-load factors
A21	IT team size	10 employees	3% of workforce; typical for this size and industry
A22	Leadership AI attitude	Curious but cautious	Modelled on typical mid-market US logistics company leadership posture

Scoring Scale Definition

Each of the five readiness dimensions is scored on a **1.0 to 5.0 scale** using the following descriptors:

Score	Label	Description
1.0 – 1.5	Absent	No meaningful capability or foundation exists in this dimension
1.6 – 2.0	Minimal	Very early stage; significant gaps; foundational investment required before AI
2.1 – 2.5	Developing	Some capability exists; meaningful gaps remain; targeted investment needed
2.6 – 3.0	Functional	Adequate capability to support targeted AI deployments with appropriate support
3.1 – 3.5	Established	Solid capability; supports systematic AI deployment with modest augmentation
3.6 – 4.0	Advanced	Strong capability across sub-factors; ready for complex AI programmes
4.1 – 5.0	Leading	Best-in-class capability; ready for autonomous AI transformation

Dimension Weighting

For the purposes of calculating the overall AI Readiness Score, each dimension carries equal weighting (20% each):

Overall Score = 5 (D1 + D2 + D3 + D4 + D5)

ROSCO Overall = 2.5 + 2.0 + 3.0 + 2.5 + 3.5 = 13.5 / 5 = 2.7

The following industry research and benchmarks informed the assumptions, opportunity sizing, and risk assessments in this report:

Benchmark	Data Point	Source
Freight invoice error rate	15–20% of carrier invoices contain billing discrepancies	NASTC; FreightAudit.com industry data
Coordinator time on carrier sourcing	40–55% in manual-process brokerage environments	MercuryGate; Coyote Logistics benchmarking
AI load tendering adoption ROI	12–18% reduction in carrier costs; 60–80% reduction in tendering time	Convoy; Transplace case study data
IDP accuracy for logistics documents	94–98% extraction accuracy	ABBYY, HyperScience published accuracy benchmarks
CS automation rate (logistics chatbots)	55–70% of routine inquiries resolved without human agent	Intercom; Zendesk logistics customer benchmarks
Route optimisation fuel savings	7–12% fuel cost reduction	Samsara; Trimble fleet optimisation studies
Freight claim rates (US logistics)	0.5–0.7% of freight spend	FreightClaims.org industry data
AI forecasting accuracy improvement	20–35% reduction in forecast error vs. manual	Gartner Supply Chain Research 2023
Average 3PL carrier cost as % of revenue	40–55% of gross revenue	Armstrong & Associates 3PL Study
3PL industry EBITDA margin	8–14% for mid-market US operators	Prologis/Armstrong & Associates 2023 Study

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END OF REPORT

Document Control	Detail
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