ATLAS CRM & FULFILLMENT SYSTEM

Complete Implementation Roadmap

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Executive Summary

This document provides a comprehensive gap analysis and implementation roadmap for the Atlas CRM & Fulfillment System. It compares the current system state against client requirements across 6 major phases, identifying completed features, partial implementations, and pending work items.

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1. EXECUTIVE SUMMARY & CURRENT STATE

System Overview

The Atlas CRM & Fulfillment System is a comprehensive e-commerce fulfillment platform built on Django 5.2 with PostgreSQL. The current deployment is live at **https://atlas-crm.alexandratechlab.com** with SSL/TLS encryption via Let's Encrypt.

Current Implementation Status by Module

Module	Status	Completion %	Notes
User Management	Partial	70%	Core RBAC done, UI needs work
Role-Based Access Control	Complete	90%	Full RBAC with audit logs
Order Management	Partial	75%	Workflow complete, UI partial
Call Center Module	Partial	60%	Views exist, needs dashboard
Packaging System	Partial	65%	Models complete, QC partial
Delivery Management	Complete	85%	Full DMS with GPS tracking
Finance Module	Partial	55%	Payments done, reports pending
Inventory/WMS	Partial	60%	Stock tracking done, alerts pending
Sourcing Module	Partial	50%	Supplier management done
Reporting & Analytics	Pending	20%	Basic exports only

2. PHASE 1: FOUNDATIONAL & SYSTEM-WIDE REQUIREMENTS

1.1 UI/UX Standards

Requirement	Current Status	Priority	Effort
Responsive design (desktop + mobile)	Partial	High	3 days
Consistent navigation sidebar	Complete	High	Done
Dashboard with KPIs and charts	Partial	High	5 days
Color-coded status badges	Complete	Med	Done
Toast notifications	Complete	Med	Done
Loading indicators	Partial	Med	1 day
Data tables with sort/filter/search	Partial	High	3 days
Inline editing capability	Pending	Med	4 days
Bulk action support	Partial	Med	2 days
Print-friendly views	Pending	Low	2 days

1.2 Backend Architecture

Requirement	Current Status	Priority	Effort
Django 5.2+ with PostgreSQL	Complete	High	Done
RESTful API endpoints	Partial	High	5 days
Celery task queue integration	Pending	High	3 days
Redis caching layer	Pending	Med	2 days
Soft delete implementation	Partial	Med	2 days
Full audit trail logging	Complete	High	Done
Environment-based configuration	Complete	High	Done
Database migrations management	Complete	High	Done

1.3 Role-Based Access Control

Requirement	Current Status	Priority	Effort
Admin role - full system access	Complete	High	Done
Seller role - product/order management	Partial	High	2 days
CallCenter role - order verification	Complete	High	Done
Warehouse role - stock operations	Complete	High	Done
Packaging role - pack operations	Complete	High	Done
Finance role - payments/invoices	Complete	High	Done
Delivery role - courier management	Complete	High	Done
StockKeeper role - inventory ops	Complete	High	Done
Sourcing role - supplier management	Complete	High	Done

Dynamic permission assignment	Complete	High	Done
Role hierarchy inheritance	Pending	Med	3 days

3. PHASE 2: AUTHENTICATION & USER MANAGEMENT

2.1 Authentication System

Requirement	Current Status	Priority	Effort
Email-based login (no username)	Complete	High	Done
Secure password with Django validators	Complete	High	Done
Remember me functionality	Complete	Med	Done
Forgot password via email	Complete	High	Done
Session timeout (configurable)	Partial	Med	1 day
Two-Factor Authentication (2FA)	Partial	High	3 days
Login attempt rate limiting	Pending	High	2 days
Account lockout after failed attempts	Pending	High	1 day

2.2 User Registration & Approval

Requirement	Current Status	Priority	Effort
Self-registration with email verification	Complete	High	Done
Admin approval workflow	Complete	High	Done
Registration rejection with reason	Complete	Med	Done
Email notifications for status changes	Partial	Med	2 days
User profile management	Partial	Med	2 days
Profile photo upload	Complete	Low	Done
Activity log per user	Complete	Med	Done

2.3 Admin User Management

Requirement	Current Status	Priority	Effort
User CRUD operations	Complete	High	Done
Role assignment interface	Complete	High	Done
Permission override per user	Complete	Med	Done
User status toggle (active/inactive)	Complete	High	Done
User search and filtering	Partial	Med	1 day
Bulk user operations	Pending	Low	2 days
User export functionality	Pending	Low	1 day

4. PHASE 3: SOURCING & INVENTORY (WMS)

3.1 Supplier Management

Requirement	Current Status	Priority	Effort
Supplier CRUD with contact info	Complete	High	Done
Supplier quality scoring	Complete	Med	Done
Supplier delivery performance tracking	Complete	Med	Done
Supplier price scoring	Complete	Med	Done
Supplier document uploads	Complete	Med	Done
Supplier status management	Complete	High	Done
Supplier product catalog linking	Partial	Med	2 days

3.2 Sourcing Requests

Requirement	Current Status	Priority	Effort
Sourcing request creation workflow	Complete	High	Done
Request approval process	Complete	High	Done
Request document attachments	Complete	Med	Done
Multi-status workflow (draft/submitted/approved)	Complete	High	Done
Request timeline tracking	Partial	Med	2 days
Email notifications for status changes	Pending	Med	2 days

3.3 Warehouse & Inventory

Requirement	Current Status	Priority	Effort
Multi-warehouse support	Complete	High	Done
Warehouse location/zone management	Complete	High	Done
Stock level tracking per product/location	Complete	High	Done
Min/Max stock level alerts	Partial	High	2 days
Inventory movement tracking	Complete	High	Done
Stock adjustment workflow	Partial	Med	2 days
Barcode/QR code scanning	Complete	High	Done
Cycle counting support	Complete	Med	Done
Stock reservation for orders	Partial	High	3 days
Inventory valuation reports	Pending	Med	3 days

5. PHASE 4: ORDER & FULFILLMENT (CRM & PICK/PACK)

4.1 Seller Portal

Requirement	Current Status	Priority	Effort
Product CRUD with images	Complete	High	Done
Auto-generated SKU codes	Complete	High	Done
Product approval workflow	Complete	High	Done
Order submission interface	Complete	High	Done
Order status tracking	Complete	High	Done
Seller dashboard with stats	Partial	Med	3 days
Product deletion request workflow	Complete	Med	Done
Sales channel management	Complete	Med	Done
Bulk product import (CSV)	Pending	Med	4 days

4.2 Call Center Module

Requirement	Current Status	Priority	Effort
Order queue with filters	Partial	High	2 days
Customer contact information display	Complete	High	Done
Order confirmation workflow	Complete	High	Done
Order cancellation with reason	Complete	High	Done
Order modification capability	Partial	Med	3 days
Call notes/comments on orders	Complete	Med	Done
Callback scheduling	Pending	Med	3 days
Call center dashboard/stats	Pending	Med	4 days
Agent performance metrics	Pending	Low	3 days

4.3 Packaging & Pick/Pack

Requirement	Current Status	Priority	Effort
Packaging task assignment	Complete	High	Done
Packaging record creation	Complete	High	Done
Barcode generation for packages	Complete	High	Done
Packaging materials tracking	Complete	Med	Done
Quality check workflow	Complete	High	Done
Package weight/dimensions capture	Complete	Med	Done
Multi-item order packaging	Partial	Med	2 days
Packing slip generation	Pending	Med	2 days
Package photo capture	Pending	Low	2 days

6. PHASE 5: DELIVERY & FINANCE (DMS & ACCOUNTING)

5.1 Delivery Management System

Requirement	Current Status	Priority	Effort
Delivery company management	Complete	High	Done
Courier CRUD with credentials	Complete	High	Done
Delivery record creation	Complete	High	Done
Delivery status tracking	Complete	High	Done
Delivery status history log	Complete	High	Done
Delivery attempt tracking	Complete	High	Done
GPS location tracking for couriers	Complete	Med	Done
Delivery proof (photo/signature/OTP)	Complete	High	Done
Delivery route optimization	Complete	Med	Done
Courier session management	Complete	Med	Done
Delivery performance metrics	Complete	Med	Done
Manager confirmation workflow	Complete	High	Done
Courier mobile app API	Pending	High	10 days

5.2 Finance & Payments

Requirement	Current Status	Priority	Effort
Payment recording	Complete	High	Done
Multiple payment methods	Complete	High	Done
Truvo payment integration	Complete	High	Done
Invoice generation	Complete	High	Done
Order fee breakdown	Complete	High	Done
Platform sync logging	Complete	Med	Done
COD collection tracking	Partial	High	2 days
Payment reconciliation	Pending	High	5 days
Financial reports	Pending	High	5 days
Seller payout management	Pending	High	5 days
Refund processing	Pending	Med	3 days
Commission calculation	Partial	Med	3 days

7. PHASE 6: SECURITY & DATA INTEGRITY

6.1 Security Measures

Requirement	Current Status	Priority	Effort
HTTPS/SSL enforcement	Complete	High	Done
CSRF protection	Complete	High	Done
XSS prevention	Complete	High	Done
SQL injection prevention	Complete	High	Done
Password hashing (bcrypt/argon2)	Complete	High	Done
Session security	Complete	High	Done
Rate limiting	Pending	High	2 days
IP-based access control	Pending	Med	2 days
Security audit logging	Complete	High	Done
File upload validation	Partial	High	1 day
API authentication (JWT/Token)	Partial	High	3 days

6.2 Data Integrity & Backup

Requirement	Current Status	Priority	Effort
Database referential integrity	Complete	High	Done
Data validation on models	Complete	High	Done
Audit trail for critical actions	Complete	High	Done
Automated database backups	Pending	High	2 days
Backup restoration testing	Pending	High	1 day
Data export functionality	Partial	Med	3 days
GDPR compliance features	Pending	Med	5 days
Data retention policies	Pending	Med	2 days

8. IMPLEMENTATION TIMELINE & PRIORITY MATRIX

Priority Classification

Critical (Week 1-2): Security fixes, core workflow completion
High (Week 2-4): Dashboard improvements, reporting, API completion
Medium (Week 4-6): UI enhancements, bulk operations, notifications
Low (Week 6-8): Nice-to-have features, optimizations

Recommended Implementation Schedule

Week	Focus Area	Key Deliverables	Effort
1-2	Security & Critical Fixes	Rate limiting, 2FA completion, login protection	8-10 days
2-3	Dashboard & Analytics	KPI dashboards, charts, real-time updates	8 days
3-4	API & Integration	REST API completion, Celery tasks, Redis caching	10 days
4-5	Finance Module	Reconciliation, reports, seller payouts	10 days
5-6	UI/UX Improvements	Responsive design, data tables, bulk actions	8 days
6-7	Notifications & Automation	Email system, alerts, automated workflows	6 days
7-8	Testing & Documentation	Integration tests, user guides, API docs	6 days

9. RESOURCE REQUIREMENTS

Development Team

Recommended Team Composition:
- 1 Senior Django Developer (Full-time, 8 weeks)
- 1 Frontend Developer (Part-time, 4 weeks)
- 1 QA/Testing Engineer (Part-time, 3 weeks)
- 1 DevOps Engineer (Part-time, 1 week)

Infrastructure Requirements:
- Redis server for caching and Celery
- Celery worker processes
- Enhanced monitoring (Sentry/NewRelic)
- Automated backup system

Estimated Total Effort: 55-65 developer days

10. RISK ASSESSMENT & MITIGATION

Risk	Impact	Probability	Mitigation
Security vulnerabilities	High	Medium	Priority security audit and fixes
Data loss	High	Low	Implement automated backups immediately
Performance issues	Medium	Medium	Add caching, optimize queries
Scope creep	Medium	High	Strict change management process
Integration failures	Medium	Low	Comprehensive API testing

Conclusion

The Atlas CRM & Fulfillment System has a solid foundation with approximately 65% of core functionality already implemented. The remaining work focuses primarily on security hardening, dashboard/reporting improvements, and completing the finance module. With a dedicated team following this roadmap, full completion is achievable within 8 weeks.