



SOLUTION CAPABILITY GUIDE

SalesLife POS

Complete AI enabled retail platform

Store operations · ERP integration · KRA eTIMS · Payments · AI agents · Multi-branch deployment

01

Sell

Cash sale · Self-checkout · Returns · Documents

02

Supply

PO · GRN · Transfers · WOs · Batch/serial

03

Finance

AR/AP · eTIMS · Settlements · EOD

04

Connect

HQ sync · SAP B1 · D365 · M-Pesa

05

Intelligence

8 AI agents · Copilot · Local MCP

06

Trust

Biometrics · TPM · Dual approval · Audit

Platform at a glance

SalesLife POS is a modern AI enabled retail platform for African multi-branch operators — offline-first at the till, orchestrated through SalesLife HQ, and connected to ERP, fiscal, and payment ecosystems.

22

FUNCTIONAL MODULES

112

STANDARD REPORTS

8

AI AGENTS (PROGRAMME)

∞

OFFLINE CASH SALES

WHO IT SERVES

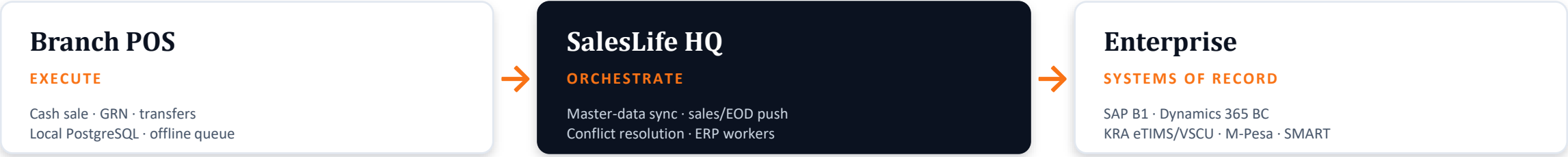
Audience	Capability focus
Store floor	Cash sale, self-checkout, returns, lay-by, loyalty, till close
Back office	PO → GRN → AP, stock transfers, cycle counts, production WOs
Finance	AR/AP, settlements, eTIMS, WHT, EOD batches, three-way match
HQ / IT	Multi-branch sync, ERP posting, AI insights, MSIX fleet deployment

DESIGN PRINCIPLE

Cashiers sell at full speed offline or online. Finance posts from ERP with full traceability. Branch POS never calls SAP or D365 directly — SalesLife HQ validates, stages, and idempotently posts.

Solution architecture

Three-tier control surface: edge POS, HQ orchestration, enterprise systems of record.



Flow	Detail
Master data	HQ → POS pull (products, customers, prices, users, promotions, tills)
Transactions	POS → HQ push (sales, refunds, EOD batches, loyalty, audit)
Inventory	Bi-directional — GRN/stock moves at branch; valuation in ERP via HQ
Outbox	Failed HQ pushes queued locally and replayed on reconnect

OFFLINE MODE

Cash sales, cash tender, credit account, and local stock lookup continue when disconnected. M-Pesa STK, card terminals, HQ sync, and cloud fiscal signing pause until connectivity returns.

Sales & till operations

Cash sale

- Barcode scan, category grid, advanced search, live food-scale weight
- Split tender: cash, card, M-Pesa STK, Airtel, credit account, gift card, loyalty
- Line qty / price / discount with supervisor gates
- Batch & serial selection; customer attach; KRA buyer PIN capture
- Hold / resume, cashier handoff, pending payments queue
- Convert cart to invoice, sales order, or quotation
- Email / WhatsApp / SMS document delivery (queued)

ACCEPTED TENDERS

Cash

Card

M-Pesa STK

Airtel Money

Credit account

Gift card

Loyalty

Till session

- Open register — float declaration by amount or denomination
- Close register — tender count, variance, session sign-out
- Till movements — pay-in, pay-out, safe drop, float top-up
- Z-report — session sales, tender mix, VAT totals
- EOD batch review — financial close batches
- Till lock, switch cashier, Windows Hello unlock

Also included

- Self-checkout lane · Queue busting handheld · Returns desk
- Sales history · Price check · Reprint receipt
- Manager override · Customer display (second monitor)

Sales documents & returns

Document	Capability
Invoices	Posted AR invoices; workflow approval; fiscal signing; HQ push
Sales orders	Open / fulfilled orders; convert from quotation; ATP promises
Quotations	Customer quotes with expiry; convert to SO or invoice
Credit memos	AR credit documents linked to returns
Refunds	Posted refund receipts; fiscal credit notes where required

Returns & exchanges

- Receipt return — lookup original sale; partial line return; reason codes; return-to-stock
- Exchange — return credit + replacement items in one transaction
- No-receipt return — supervisor-approved with fraud-indicator reporting
- Assisted refund — guided workflow from receipt scan

Workflow engine

- Configurable approval chains per document type (draft → submit → approve → post)
- Dual approval queue for high-value actions
- Full audit trail on overrides

Retail & customer engagement

1

Lay-by

Deposits, instalment schedule, completion, cancellation, and forfeiture with dedicated aging reports.

2

Gift cards

Issue, reload, balance inquiry, partial redemption at till, liability reporting.

3

Loyalty

Member enrolment, tier tracking, points accrue/redeem, profile history; HQ sync for cross-branch members.

Omnichannel	Capability
Online orders	Pickup and delivery queue; realtime partner feed; fulfilment handoff
Delivery partners	Map Glovo, Uber, Bolt, Jumia to POS customers for settlement
Queue busting	Floor-selling companion cart on same PC

CUSTOMER MASTER

Customer groups, pricing rules, merge duplicates, marketing consent, Customer 360 export, open ledger and loyalty profile from customer list.

Inventory & supply chain

Stock visibility

- Stock balance — on-hand, reserved, available
- Availability alerts — low-stock and out-of-stock
- Stock ledger journal — line-level movements with document refs
- Multi-branch enquiry — local warehouses + HQ rollup
- ATP promises — delivery date commitments
- Reorder suggestions (rules-based + AI agent A1)

Traceability & production

- Batch inventory — FEFO, expiry filters, batch trace
- Serial registry & serial traceability (receive → sale → return)
- Work orders — kitting / manufacturing from BOM
- Food scale WOs — weight/PLU sales auto-generate production orders
- Product BOM / food recipes — raw material consumption on prepared food sales

Operations

- Inter-branch stock transfers with in-transit tracking
- Cycle counts — blind count, variance posting
- Stock adjustments — shrinkage, damage, quarantine
- Consignment — supplier-owned stock agreements

FOOD RETAIL

Weighted items at till integrate with scale hardware; sold PLUs net inventory through automatic work orders and recipe BOMs — ideal for supermarkets, butcheries, and deli counters.

Procurement — PO · GRN · AP

Full procure-to-pay at the branch with ERP reconciliation through HQ.

Process	Capabilities
Purchase orders	Create supplier POs; line qty and cost; approval workflow; open PO reporting
GRN (goods receipt)	Receive against PO (full/partial); batch/serial capture; post stock to warehouse
Stock requisitions	Inter-warehouse requests; fulfil; ship; confirm receipt
Purchase invoices	Branch AP invoices from GRN/PO; approve; post to vendor ledger
Three-way match	PO · GRN · supplier invoice variance queue and resolution
Vendor payments	Pay posted invoices with method and reference; AP ageing

ERP SYNC

PO publish, GRN receipt confirmation, and AP invoice posting flow to SAP B1 or D365 BC via HQ integration workers — branch maintains operational truth; ERP holds financial SOR.

Finance, tax & compliance

Receivables & payables

- AR aging and customer statements
- Credit account sales at till with limit checks
- Customer / vendor party ledgers
- Credit hold and collections escalation reports
- AP purchase invoices and vendor payments

Tax & fiscal

- WHT remittance certificates — generate, issue, export
- VAT summary and zero-rated disclosure reports
- KRA eTIMS signing via local VSCU agent
- Fiscal retry queue — bulk/single retry with supervisor approval
- Compliance task queue — eTIMS SLA breach officer workflow

Settlements

- M-Pesa C2B reconciliation — paybill matching
- M-Pesa settlement file import (Safaricom CSV)
- Bank / PesaLink settlement reconciliation
- Payment gateway exception dashboards

Governance

- Dual approval queue — two-supervisor sign-off
- Security override log — voids, refunds, discounts
- Segregation-of-duties exception reporting

Master data & pricing

Searchable hub for all reference data — locally editable with HQ sync for fleet consistency.

Domain	Entities
Catalog	Products, variants, barcodes, categories, BOM/recipes, batch master
Customers	Accounts, groups, merge, delivery partner mapping
Pricing	Price lists (dated headers + lines), promotions, sale discount rules
Finance ref	Currencies, exchange rates, payment methods, tax types
Locations	Warehouses, selling locations, branch tills, workstation bindings
Procurement	Vendors/suppliers with AP ledger drill-down
People	Employees, clock, labour hours; users, roles, permissions

ALSO INCLUDED

Number series — configurable automatic numbering for documents and master codes. Settings — procurement limits, auto-reorder, branding, hardware, workflows.

Analytics & reporting

112 FRD-standard reports (RPT-001 ... RPT-112) with PDF/CSV export — all runnable from local branch data.

Sales & till

Daily sales, cashier/till, hourly heatmap, tender mix, basket size, handoff aging, drawer events.

Inventory

Stock on hand, ageing, cycle count variance, batch expiry, serial trace, in-transit transfers.

Finance

VAT summary, AR aging, bank recon, GRNI, three-way match exceptions, COGS by branch.

Hub	Description
Store dashboard	Live floor KPIs — today's sales, hourly chart, top products, payment mix
HQ dashboard	Cross-branch rollup — sales, tenders, labour, shrinkage variance, alerts
Analytics hub	Ops health, consignment, serial analytics, AI insights entry point
Scheduled export	Background report export worker for automated distribution

AI platform — local-first intelligence

On-device inference via Foundry Local / OpenAI-compatible endpoint. Disabled by default; never blocks checkout.

Principle	Implementation
Local-first	Default runtime on till PC or branch appliance — no customer PII required to leave the store
Till-safe	GuardedChatClient — timeout, circuit breaker, single-flight; heuristic fallback when model offline
Idle-gated	Background worker skips runs while till active (no sale in last 10 min)
Auditable	Agent runs cached in AiInsightsCache; ops-health events on failures
Human gate	Agents propose — dual approval required for price changes, write-offs, draft PO post
Scoped tools	MCP servers expose narrow POS APIs — never raw SQL (roadmap)

CONFIGURATION

Settings → Integrations / appsettings Ai section: Enabled, ModelAlias (phi-4-mini), LocalEndpoint, per-agent toggles, MCP ports 7410–7413 on loopback only.

AI agents — implemented today

Three production agents on AI Insights (Analytics hub). UI: instant cache load; inference on refresh or chat only.

Agent	Purpose	Trigger	Output
A1 Demand & replenishment	Suggest reorder qty from sell-through velocity, reorder points, days-of-cover; LLM enriches rationale	Background every 6h (idle-gated) + manual refresh	Reorder suggestion cards with confidence
A2 Shrinkage & anomaly	Flag refund spikes, void rates, discount abuse, till shortages, cashier concentration	Same background worker + manual refresh	Risk summary + factor list; HQ shrinkage KPI
A3 Analytics copilot	Natural-language Q&A over local POS data via read-only tools — never writes	User chat in AI Insights only	Answers from sales, products, stock, refunds tools

Copilot tools (read-only)

- GetSalesSummary · GetTopProducts · GetSalesByDay
- GetLowStockProducts · GetRefundSummary

Supporting analytics

- Demand forecast per SKU (DOW averaging + confidence) via IPosPredictiveService — feeds replenishment agent heuristics.

AI agents — roadmap & MCP

Five additional agents and four local MCP servers complete the eight-agent programme.

Agent	Purpose	Key MCP tools
A4 Pricing advisor	Margin erosion alerts; basket promotion suggestions — never auto-writes prices	pos.pricing.list · pos.promotions.active · pos.margin.byProduct
A5 Fiscal assistant	Explain eTIMS queue failures; prioritise retry order; summarise WHT	pos.fiscal.queue · pos.wht.list · pos.compliance.tasks
A6 Loyalty concierge	Enrol guidance, tier progress, redeem rules (blocks offline redeem)	pos.loyalty.lookup · pos.loyalty.enrol · pos.loyalty.ledger
A7 Sync steward	On reconnect — prioritise conflict resolution and outbox replay	pos.sync.status · pos.sync.conflicts · pos.sync.resolve
A8 SOP coach	In-app help from local FRD/SOP pack for cashiers	pos.docs.search (local files only)

LOCAL MCP SERVERS (LOOPBACK)

saleslife-pos-core-mcp

:7410

Reports, sales summary, stock, loyalty read

saleslife-pos-ops-mcp

:7411

Audit, till, fiscal queue, sync conflicts

saleslife-pos-supply-mcp

:7412

Reorder, PO draft, GRN variance

saleslife-pos-docs-mcp

:7413

Local FRD / SOP search

SalesLife HQ sync

Bi-directional synchronisation between branch POS and SalesLife HQ API — the only path to ERP and cloud services.

Push (POS → HQ)

- Posted cash sales, refunds, and credit memos
- EOD financial batches and till close events
- Loyalty transactions and member changes
- Workstation / till registry
- Audit and ops events

Pull (HQ → POS)

- Products, barcodes, variants, BOMs, categories
- Customers, groups, price lists, promotions, discounts
- Users, roles, branch access
- Inventory snapshots and HQ stock enquiry
- Tills, locations, payment method config

RESILIENCE

Sync outbox — failed pushes queued with retry. Sync conflicts — UI to resolve local vs HQ master-data divergences. Manual triggers — Sync now, master pull, outbox replay from Settings and Ops health.

ERP — SAP B1 & D365 BC

SalesLife HQ posts to ERP; branch POS never holds ERP credentials or calls Service Layer directly.

Flow	SAP Business One	Dynamics 365 BC
Master data	Items, BP, price lists, warehouses from SAP via HQ pull workers	Items, customers, vendors via HQ (legacy NAV OData deprecated on till)
Sales	A/R invoices, incoming payments, inventory issues from POS sales	Cash sale push / order pull via HQ
Procurement	PO publish, GRN → goods receipt PO, AP invoice posting	Purchase documents via HQ staging
Production	Work order / production posting for food scale and kitting	Assembly orders via HQ
Reconciliation	Month-end POS-to-ERP report; idempotent posting with audit refs	Integration mapping workbook in docs

DOCUMENTATION

SAP B1 integration brochure, client proposal v2.0, and HQ integration mapping workbook available under docs/brochure and docs/integrations.

Fiscal, payments & partners

KRA eTIMS

- Sign sales and refunds via local VSCU agent (KRA spec v2.0)
- Store fiscal QR payload on documents
- Offline queue — unsigned invoices queued; background worker retries
- SLA compliance escalation to officer task queue
- Simulator mode for UAT without live VSCU

Payments

- M-Pesa STK Push and C2B via SalesLife middleware
- Airtel Money STK
- Card terminals (Pesapal, EazzyPay, generic gateway)
- Cash, bank transfer, voucher, instalment, gift card, loyalty

SMART insurance

- Member card lookup via SMART B2B API
- Hospital claim file submission at till
- Service details capture on insured sales

Communications

- SMS, WhatsApp, email receipt and document delivery
- Communications outbox — retry, discard, channel KPIs
- Digital receipt dialog at payment completion

INSURANCE & DELIVERY

Integration secrets in Credential Locker. Demo providers for training environments.

Security, identity & biometrics

Access control

- Role-based permissions — cashier, supervisor, manager, admin
- Branch access guard — users scoped to authorised locations
- Supervisor approval — voids, refunds, discounts, price overrides
- Dual approval — two distinct supervisors for high-value actions
- Failed login lockout and permission matrix export

Biometric programme

- Fingerprint / facial enrollment dialog
- Biometric transaction approval — threshold-based for high-value sales
- Duo biometric approval — two enrolled staff for sensitive actions
- TPM-backed template storage via TpmHelper process (outside MSIX sandbox)
- Cross-terminal templates — Credential Locker + DB dual-write

Identity

- Local offline password authentication
- Windows Hello — login and supervisor dialogs
- MSAL enterprise identity provider hook
- Session lease and remote session revoke via HQ

Data protection

- Encrypted branch database backups
- Credential Locker for DB and integration secrets
- Till idle lock (3-minute timeout configurable)
- Full security override and master-data change audit logs

Deployment & operations

Capability	Detail
MSIX packaging	Windows App SDK single-project MSIX; Demo and Production install profiles
Branch server model	Till 1 hosts PostgreSQL; additional tills connect to shared branch DB
First-run wizard	Database, till code, currency, HQ URL, optional AI endpoint
Additional till setup	Discover branch server; register workstation binding
Schema migration	Migrate-on-startup; fleet-wide same MSIX version policy
Ops & backup	DB health, local backup run/prune, sync outbox view, pre-close checklist
Safe mode	Recovery startup without full UI shell
CI/CD	GitHub Actions — ci-msix.yml, signed release-msix.yml on version tags

COMMAND PALETTE (CTRL+K)

Instant navigation to every major screen including AI insights, sync, and fiscal queues.



SalesLife POS

Complete AI enabled retail platform

- Offline-first till · Full procure-to-pay · KRA eTIMS · M-Pesa & card tenders
- SAP B1 & D365 BC via SalesLife HQ · 112 standard reports · Workflow & dual approval
- 8 AI agents (local-first) · MCP tool servers · Analytics copilot
- MSIX fleet deployment · Biometric & TPM security · Multi-branch PostgreSQL

SalesLife Technologies

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