

VectorMind AI for Fresh Produce Exporters

**From pack line to port:
accurate consignments, faster
reconciliations and fewer
disputes.**

CohesionX's VectorMind applies secure, auditable Gen-AI to delivery notes, pack lists, QA certificates and logistics streams for exporters to recover margin, reduce exceptions, and provide a single source of truth for operations, commercial teams and customers.



Fresh produce exporters and markets operate at the intersection of physical throughput and paper-work: pallets move fast, but the documents that prove quantity, quality and entitlement are slow. Fragmented pallet, warehouse and shipment records, scattered packing slips and QA certificates, multiple booking platforms and inconsistent operational guidance across shifts create shortages, billing disputes and slow exception resolution. VectorMind AI for Fresh Produce recognises these pain points and embeds multimodal ingestion, provenance linking, rule automation, and explainable reasoning so your teams can close cases faster, post correct charges to ERP and keep customers informed with defensible evidence.

Order & Consignment Reconciliation

A mismatch between what left the pack line and line and what appears on customer paperwork causes shortages, claims and reputational damage; VectorMind automates capture and links physical records to documents to prove fulfilment and trigger accurate billing.



How it works

- **Ingest:** Iris collects packing slips, pallet tags, weighbridge tickets, carrier manifests, QA certificates, and photos from scanners, driver uploads, and emails.
- **Extract & Normalise:** Iris extracts lot IDs, pallet counts, pallet weights, bin locations, and QA attributes; normalises units and thresholds.
- **Build Provenance:** Atlas links extracted records to the originating production batch, warehouse bin, loading event, and carrier booking; creates a time-stamped evidentiary graph for each consignment.
- **Reconcile & Validate:** Neuroflow runs reconciliation rules (pallet count vs manifest, weight tolerances, QA pass criteria), flags mismatches, and auto-resolves straightforward tolerances.
- **Exception Handling:** Neuroflow opens exception cases (missing docs, short pallets, temperature excursions) with a prefilled dossier including photos and telemetry; assigns owners and enforces SLA timelines.
- **Communicate & Archive:** Business GPT drafts customer notifications and provisional resolution steps; Atlas stores the full evidence pack for audits and dispute defence.

Gains

- **Reduced client shortages** and faster dispute resolution with source-linked evidence.
- **Fewer manual checks** on the pack line and faster shipment close-out.
- **Improved warehouse utilisation** and fewer mis-loaded pallets via provenance and bin tracking.
- **Lower claims** and reduced customer churn through faster, transparent communication.
- **Auditable evidence** for buyer inspections and customs queries.



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Supplier & Utility Cost Allocation, Billing & ERP Posting

Incorrect apportionment of municipal, handling, and supplier charges erodes margin and creates billing disputes; VectorMind ensures costs are allocated to customers according to contractual rules and posted accurately to ERP systems.

How it works:

Iris ingests supplier invoices, municipal charges, and runtime logs, and Atlas links those bills to consignments, contracts and packing records. Neuroflow then applies contract or consignment allocation rules, validates totals against weighbridge and packing data, writes approved charge lines to ERP and issues accurate invoices while Business GPT prepares dispute or settlement communications when exceptions occur.



Accurate customer billing | Faster end-to-end processing | Reduced manual recon

More Fresh Produce Exporting Use Cases

Cold-Chain Monitoring & Temperature Excursion Management

Temperature excursions during packing or transit compromise quality & lead to rejections; data is often stored in siloed telemetry streams & not linked to shipment documents. Iris ingests temperature logs & sensor feeds, Atlas links excursions to specific pallets & consignments, Neuroflow triggers holds & remedial actions, while Knowledge Nodes provide operator guidance on corrective steps.

Order Visibility & Customer Service Assistant

Commercial teams lack a single view of order & consignment status, causing repeated enquiries & slow responses. Atlas and Synaptic Search provide a unified view across packing, warehouse & shipping records; Knowledge Nodes power a customer service assistant (Teams/WhatsApp/portal) that responds with cited evidence and status updates while Neuroflow routes escalations.

Grower Network Assist & Traceability

Growers need quick, localised guidance and simple intake for claims or QA, but large exporters struggle to scale human extension officers. Knowledge Nodes deliver grower-facing assistants (WhatsApp, SMS) trained on SOPs, QA tolerances and local languages; Iris ingests grower uploads (photos, certificates), Atlas links produce lots to farm IDs. Neuroflow escalates quality or payment exceptions to the export team.

Quality Assurance & Certificate Management

QA certificates, lab results & phytosanitary documents are scattered across emails & paper files, making compliance & buyer verification slow. Iris extracts QA and lab data, Atlas links certificates to consignments & supplier lots, Neuroflow enforces release gates based on QA rules. Business GPT prepares submission-ready summaries for buyers & regulators.

Reverse Logistics & Returns Handling

Returns & remedial shipments create complex reverse-logistics flows & reconciliation headaches when documentation is missing or incorrect. Iris captures return documentation & carrier receipts, Atlas maps returned lots to original consignments, Neuroflow automates return authorisations, credit notes & ERP reversals. Business GPT drafts customer communications to expedite resolution.

Contract & Pricing Clause Extraction

Guest Complex supplier contracts & customer pricing terms are interpreted manually, causing mispricing and disputes. Iris extracts pricing, discount & penalty clauses from contracts and appendices; Atlas links clauses to commercial records; Business GPT summarises the commercial position & Neuroflow applies pricing rules to invoices and settlements.



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your data, our AI

VectorMind provides an affordable, easy-to-integrate Gen-AI solution, giving your employees access to the magic of all the top global commercial Gen-AI platforms, without exposing IP and sensitive data.



**Get rid of tedious
tasks & human error**



**Automate actions &
set alerts**



**Always ensure factual
AI answers**



**Homegrown
affordable South
African software**

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