

Warehouse Automation System Implementation Proposal — Conveyor, Sortation, and WMS Integration

To: Operations Director (client name withheld at client request)

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1. Background

The client is a mid-size 3PL operating an approximately 40,000 sqft facility with fully manual pick and pack operations. Current throughput is approximately 450 orders per day, while the stated peak target is 1,200 orders per day — an increase that manual processes cannot absorb. The facility handles approximately 3,000 active SKUs, consisting of a mix of small parcel and mid-size boxes up to 60cm x 40cm x 40cm and 15kg maximum weight. The receiving dock has 4 bays, of which 2 are currently used for inbound. The client wishes automation to cover both inbound sorting and outbound pack stations. A critical constraint is operational continuity: the facility cannot shut down for more than a single weekend at a time, so a phased rollout is mandatory. This proposal covers Phases 1 through 3 (receiving conveyor and sortation, pack station integration, and WMS integration). **CRITICAL SCHEDULE CONFLICT — RAISED UP FRONT, NOT DEFERRED:** the client has stated a hard deadline ahead of their peak season, approximately 4 months out, while the rough end-to-end estimate through Phase 3 completion is 5-6 months. This conflict must be resolved before contract signature; options include descoping, resequencing, or accepting partial go-live for peak season. [NEEDS REVIEW] — exact peak season date not stated in source material.

2. Proposal

Scope Overview. This proposal covers three delivery phases. Phase 1: receiving conveyor, barcode scan tunnel, and basic sortation to 8 lanes. Phase 2: pack station conveyor integration with label print-and-apply. Phase 3: WMS integration with real-time inventory sync. Note that this scope is drawn from earlier internal notes that may be outdated and should be reconfirmed with the client. [NEEDS REVIEW]

Phase 4 (Future Option Only — Not In Scope). An AS/RS or goods-to-person pilot was discussed as a stretch item. The client has not committed to it and it is explicitly excluded from this proposal. It is mentioned here only so that electrical and structural planning decisions made now do not foreclose it later.

Phased Rollout Approach to Protect Operations. All installation work is staged so that no shutdown exceeds a single weekend. Phase 1 installation is planned across 2 staged weekends; Phase 2 installation across 1 weekend. Phase 3 integration and testing is performed without a production shutdown.

Legacy WMS Integration Risk (Blocking Item). The client's existing WMS is a legacy system and the vendor is currently unclear. An API discovery phase is required before integration scope can be fixed. Until discovery is complete, Phase 3 scope, effort, and cost cannot be committed. Confirmation of the legacy WMS vendor and whether API access is possible at all is a blocking prerequisite. [NEEDS REVIEW]

Safety Requirements. Required guarding and interlocks for the new conveyor runs must be confirmed through a site safety review. This safety review has NOT yet been completed. No conveyor run should be commissioned or energized before the site safety review determines the required guarding and interlock configuration. This item must not be deferred, as it may affect layout, cost, and schedule. [NEEDS REVIEW]

Open Items Requiring Client Resolution Before Final Proposal. (1) Confirm the legacy WMS vendor and whether API access is possible — blocking. (2) Confirm the final sortation lane count; the figure of 8 lanes is a placeholder from an early call and directly affects hardware cost. (3) Confirm whether the client wants mezzanine space considered for a future Phase 4, as this affects electrical and structural planning now even if nothing is built. (4) Complete the site safety review for guarding and interlocks. (5) Confirm ownership of network infrastructure for the new scanners and PLCs — client IT or our controls team. All five items are [NEEDS REVIEW].

Commercial Basis. All figures in the quote summary are draft ballpark figures taken from a vendor call. They are NOT a formal quote and must be validated before final numbers are presented to the client. A contingency of 10-15% on top of hardware and labor is recommended as standard for a project of this type.

Terminology. WMS = Warehouse Management System. PLC = Programmable Logic Controller. AS/RS = Automated Storage and Retrieval System. 3PL = Third-Party Logistics provider. These expansions are provided for reader clarity; no formal glossary was supplied in the source material. [NEEDS REVIEW]

Revision History. No revision or version history was provided in the source material. This document is compiled from an email thread, a specification document, and call notes. [NEEDS REVIEW]

3. Schedule

Phase	Period
[NEEDS REVIEW] Discovery and design	3 - 4 weeks
[NEEDS REVIEW] Procurement lead time — conveyor hardware (critical path / long pole)	8 - 10 weeks
[NEEDS REVIEW] Phase 1 install — receiving conveyor, barcode scan tunnel, sortation to 8 lanes	2 weekends, staged
[NEEDS REVIEW] Phase 2 install — pack station conveyor integration, label print - and - apply	1 weekend
[NEEDS REVIEW] Phase 3 — WMS integration and testing (heavily dependent on prompt legacy WMS API access)	4 - 6 weeks
[NEEDS REVIEW] Total rough timeline, start through Phase 3 completion (Phase 4 not included)	5 - 6 months
[NEEDS REVIEW] Client hard deadline ahead of peak season — CONFLICTS with the 5 - 6 month estimate above	approx. 4 months out
[NEEDS REVIEW] Site safety review for conveyor guarding and interlocks — not yet performed, must precede commissioning	[NEEDS REVIEW] — not scheduled in source material

4. Expected Benefits

- Supports the stated peak throughput target of 1,200 orders per day, versus the current manual throughput of approximately 450 orders per day.
- Automates both inbound sorting and outbound pack station flows, covering the two ends of the operation the client identified as priorities.
- Reduces manual handling for approximately 3,000 active SKUs across mixed small parcel and mid-size box profiles (up to 60cm x 40cm x 40cm, 15kg maximum).
- Delivers barcode scan tunnel capture and label print-and-apply, reducing manual labeling and scanning errors.
- Provides real-time inventory sync through WMS integration in Phase 3, subject to legacy WMS API access being confirmed.
- Maintains operational continuity through a phased rollout in which no shutdown exceeds a single weekend.
- Preserves the option of a future Phase 4 AS/RS or goods-to-person pilot, provided electrical and structural planning decisions account for it now.

5. Quote Summary

Item	Qty	Amount
[NEEDS REVIEW] Conveyor and sortation hardware (range depends on final lane count)	[NEEDS REVIEW] — lane count of 8 is a placeholder	USD 180,000 - 220,000 (draft estimate, not a formal quote)
[NEEDS REVIEW] Controls / PLC integration	[NEEDS REVIEW]	approx. USD 35,000 (draft estimate, not a formal quote)
[NEEDS REVIEW] WMS integration (Phase 3) — wide range because scope is TBD pending API discovery	[NEEDS REVIEW]	USD 40,000 - 60,000 (draft estimate, not a formal quote)
[NEEDS REVIEW] Installation labor	[NEEDS REVIEW]	approx. USD 25,000 (draft estimate, not a formal quote)
[NEEDS REVIEW] Contingency (recommended, standard for this project type)	[NEEDS REVIEW]	10 - 15% on top of the above (recommendation, not a quoted figure)
[NEEDS REVIEW] Phase 4 (AS/RS or goods - to - person pilot) — NOT in scope, no pricing provided	Not in scope	[NEEDS REVIEW] — no pricing in source material