

CASE STUDY · SUPPLY CHAIN

Automating a Mid-Sized Warehouse Without Losing Flexibility

A phased move from paper picking to barcode scanning and zone picking

ORGANISATION

SECTOR

PREPARED BY

SwiftRoute Logistics (fictional) Logistics

Case writer: Your Name

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1. At a Glance

Organisation	SwiftRoute Logistics (fictional)
Sector	Logistics
Location	Gurugram
Challenge	Picking errors and slow dispatch during peaks
Solution	Barcode scanning, zone picking and a warehouse management system
Timeframe	8 months

99.6%

+35%

8 mo

Picking accuracy (sample)	Orders per shift	Roll-out
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Organisation and outcomes are illustrative; figures are sample data for teaching and templating purposes.

2. Background

SwiftRoute operates a 1,20,000 sq ft fulfilment centre serving several e-commerce clients. Picking was done from printed lists, and stock locations were tracked in spreadsheets.

During festive peaks, errors and delays increased sharply, leading to penalties from clients.

3. The Challenge

The company needed higher accuracy and throughput, but full robotic automation was too expensive and inflexible for its changing client mix.

- Picking errors during peaks
- Time lost searching for stock
- Paper lists prone to mistakes
- Limited real-time visibility for clients

We did not need robots; we needed every picker to know exactly where to go.

— Head of Operations (fictional)

4. Objectives

1. Raise picking accuracy above 99.5%.
2. Increase orders processed per shift.
3. Give clients real-time inventory visibility.

5. Approach

The project was delivered in phases so that operations never stopped.

Phase 1: Location discipline

Every bin was labelled with a barcode and stock was re-slotted by sales velocity.

- Bin labelling
- ABC re-slotting
- Cycle counts

Phase 2: Scanning

Handheld scanners guided pickers and confirmed each item.

- Scanner roll-out
- Training
- Exception handling

Phase 3: System integration

A warehouse management system connected to client order platforms and provided dashboards.

- WMS configuration
- Client integrations
- Dashboards

Implementation Timeline

Period	Milestone	Notes
Month 1–2	Labelling and re-slotting	Night shifts
Month 3–4	Scanner pilot	One client
Month 5–7	WMS roll-out	All clients
Month 8	Stabilisation	Peak readiness review

6. Results

The warehouse handled the next festive peak with fewer errors and faster dispatch.

Metric	Before	After
Picking accuracy	97.8%	99.6%
Orders per shift	2,600	3,500
Average dispatch time (hrs)	14	8
Client penalties (per month)	12	2

Exhibit 1: Key metrics before and after (sample data)

Chart placeholder — insert a before/after chart

Exhibit 2: Trend over the implementation period (sample data)

7. Lessons Learned

Fix the basics first. Clean locations made scanning effective.

Train for exceptions. Most delays came from unusual cases, not normal picks.

Phase to protect service. Night-shift changes avoided disruption.

8. Analysis

What worked

- Re-slotting by velocity
- Supervisor dashboards

What was difficult

- Data clean-up
- Scanner battery management

Opportunities

- Voice picking
- Automated packing for top SKUs

Risks to sustain

- Staff turnover
- Client system changes

9. Discussion Questions

Use these questions for classroom discussion or self-study.

4. Why did the company choose scanning over robotic automation?
5. What is the value of re-slotting by sales velocity?
6. How would you plan staffing for a festive peak after these changes?
7. What metrics should the warehouse track daily?

10. Teaching Note

Useful for supply chain and logistics courses. Students can compare the cost and flexibility of different automation options.

11. Appendix: Additional Exhibits

Error type	Share
Wrong item	46%
Wrong quantity	31%
Missed item	15%
Other	8%

Exhibit 3: Error types before the project (%) (sample data)

12. Conclusion

Targeted, phased automation delivered large gains while keeping the warehouse adaptable to new clients.