

CASE STUDY

From Manual to
Fully Automated

Real-Time EDI & API Order Integration for a Leading FMCG Distributor

100+ Choppies branches automated	0 Manual order entries required	<5s Order to SAP B1 Sales Order	
Industry FMCG / Distribution	Client DP World / PST Botswana	End Customer Choppies Supermarkets	Technology SAP B1 10.0 HANA + Boomi iPaaS

Prepared by Integr8 Software Products & Services Inc. | Toronto, Canada | 2026

1. CLIENT OVERVIEW

Client	DP World / PST Sales & Distribution Botswana
Industry	FMCG Distribution — food, beverages, household & personal care products
Region	Botswana, Southern Africa
ERP System	SAP Business One 10.0 on HANA database
Key Customer	Choppies Supermarkets — 100+ branches across Botswana
Integration Partner	Boomi iPaaS (in-house Boomi team at PST / DP World)

2. THE CHALLENGE

PST / DP World is a major FMCG supplier and distributor in Botswana, supplying products to Choppies Supermarkets across 100+ branches nationwide. Despite the scale of this relationship, the entire order processing cycle was being handled manually.

The Manual Process — What Was Happening Every Day

Each of Choppies' 100+ branches would raise a Purchase Order and send it to PST by email or phone.

PST staff would manually re-key the order line by line into SAP Business One.

A Sales Order and Invoice were manually created in SAP B1.

The invoice was then emailed back to the relevant Choppies branch.

This was repeated hundreds of times every single day across all branches.

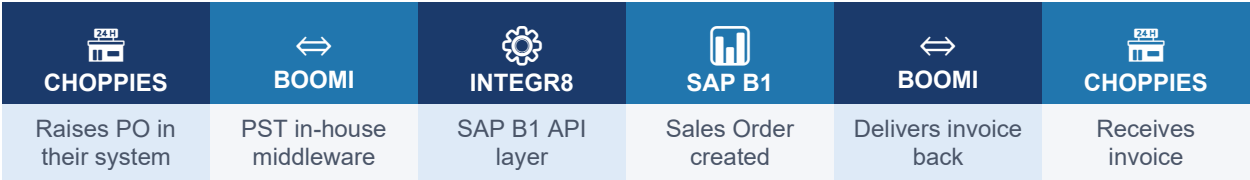
Key Pain Points

- Hundreds of hours of staff time lost to manual data entry every month
- High rate of human errors — wrong quantities, wrong item codes, wrong prices
- Order fulfilment delays due to processing backlogs
- Invoice disputes with Choppies caused by data mismatches between systems
- No real-time visibility of order status for either PST or Choppies
- No stock visibility for Choppies branches before placing orders
- Approval workflows for invoices were slow and paper-based
- As Choppies expanded branches, the manual workload grew proportionally — completely unsustainable

3. THE SOLUTION

PST engaged Integr8 — SAP Business One integration specialists — to design and build a fully automated, real-time EDI and API integration between Choppies' ordering system and PST's SAP Business One environment, using PST's in-house Boomi iPaaS platform as the middleware layer.

Three-Layer Integration Architecture



Integr8's Role — SAP B1 Integration Layer

Integr8's scope was strictly the two-way communication interface between the Boomi middleware and SAP Business One. The following interfaces were designed, built, and delivered:

#	Interface	Direction	SAP B1 Object	Trigger
1	Customer Master	SAP B1 → Boomi	Business Partner	Initial + Delta
2	Item Master	SAP B1 → Boomi	Item Master (OITM)	Initial + Delta
3	Price List	SAP B1 → Boomi	Price Lists (OPLN)	Initial + On-change
4	Discount Matrix	SAP B1 → Boomi	Special Prices	Initial + On-change
5	Sales Order	Boomi → SAP B1	Sales Order (ORDR)	Choppies PO received
6	A/R Invoice	SAP B1 → Boomi	A/R Invoice (OINV)	On invoice posting
7	Inventory Report	SAP B1 → Boomi	Warehouse Ledger	Scheduled / On-demand

Key Technical Challenges Solved

Challenge 1 — Customer Identification Across Systems

Choppies and SAP B1 used different customer identifiers. A name-based search was unreliable for automation as the same branch appeared under multiple BP records (BWP and ZAR currency variants). Integr8 designed a GLN + Currency composite key lookup — using the globally unique GLN number already present in Choppies' order payload combined with the currency code to pinpoint the exact SAP B1 Business Partner record every time.

Challenge 2 — Item Code Mapping

Choppies sends products identified by GTIN barcode. SAP B1 stores items by ItemCode. Integr8 built a barcode lookup layer that queries the SAP B1 Item Master barcode table (OITB) using the GTIN from the order and resolves it to the correct SAP B1 ItemCode before creating the Sales Order line.

Challenge 3 — Unit of Measure Conversion

Choppies orders in cases (e.g. CASX6) while SAP B1 processes in base units (PCS). The integration handles UoM conversion using the conversionFactor and baseQuantity fields in the order payload, ensuring SAP B1 always receives quantities in the correct unit.

Challenge 4 — Duplicate Order Prevention

In an automated environment, network retries can cause the same order to be submitted multiple times. Integr8 built idempotency logic using the Choppies orderId as a unique reference — if the same order arrives twice, SAP B1 returns the existing Sales Order number rather than creating a duplicate.

4. BEFORE VS AFTER

✗ BEFORE — Manual Process	☑ AFTER — Automated Integration
Choppies staff call or email PST to place orders	Choppies raises PO in their system — it arrives in SAP B1 automatically
PST staff manually type each order into SAP B1	Zero manual entry — Sales Order created in SAP B1 within seconds
Hours of processing delay per order	End-to-end processing in under 5 seconds
High rate of data entry errors	Clean, validated, error-free data every time
Invoice created manually and emailed to Choppies	Invoice automatically pushed to Choppies electronically on posting
No stock visibility for Choppies before ordering	Real-time inventory reports available to Choppies on demand
Pricing and discount disputes common	Prices and discounts synced directly from SAP B1 — single source of truth
As branches grew, workload grew proportionally	100+ branches handled with zero additional staff effort
No audit trail across systems	Full transaction log in SAP B1 UDT for every exchange

5. RESULTS & BUSINESS BENEFITS

100+ Branches fully automated	0 Manual order entries	<5s Order processing time
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Operational Benefits	Strategic Benefits
• Elimination of all manual order entry • Dramatic reduction in invoice processing time • Zero data entry errors in automated flow • Real-time order acknowledgement to Choppies • Full audit trail of every transaction • Staff redeployed to higher-value activities	• Reusable platform — onboard any future retail client • Scalable to unlimited branches at no extra cost • Competitive advantage — faster, more accurate service • Stronger relationship with Choppies through reliability • Foundation for EDI rollout to other retail customers

	• Reduced invoice disputes and improved cash flow
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6. THE STRATEGIC VALUE — A ONE-TIME INVESTMENT

The integration platform built for Choppies is not a single-use solution.

The same Boomi + SAP B1 integration layer can be reused to onboard any new retail customer — Pick n Pay, Shoprite, Spar, or any other chain — at a fraction of the original build cost.

PST has not just automated Choppies. They have built a strategic digital integration capability that will serve their entire customer base for years to come.

Every new customer onboarded generates revenue faster, with less staff effort, and at lower operational cost than before.

Reusability — What Gets Reused for Every Future Client

- SAP B1 Service Layer infrastructure and authentication setup
- Error handling, audit logging, and exception reporting framework
- Master data sync architecture (Customer, Item, Price, Discount)
- Sales Order creation and acknowledgement engine
- Invoice extraction and outbound delivery pipeline
- Inventory reporting infrastructure

Adding a new retail customer to the platform requires only a new field mapping exercise and Boomi connector — not a full rebuild. Estimated effort for the second client is 30–40% of the original investment.

7. TECHNOLOGY STACK

Component	Specification
ERP System	SAP Business One 10.0 on HANA Database
Integration Layer	SAP B1 Service Layer (RESTful OData API)
Middleware Platform	Dell Boomi iPaaS (PST in-house team)
Customer System	Choppies I-Retail / Intellect Commerce (Polaris India)
EDI Network	Vodacom xtraEDI (JSON over HTTPS)
Protocol	HTTPS / TLS 1.2+ JSON payload format
Authentication	SAP B1 Service Layer session token + OAuth2 (Choppies API)

Customer Lookup	GLN + Currency composite key → SAP B1 CardCode
Item Lookup	GTIN Barcode → SAP B1 Item Master (OITB) → ItemCode
Audit & Logging	SAP B1 User Defined Tables (UDT) — full transaction log

8. WHY INTEGR8

"The PST CFO specifically engaged Integr8 because of our deep SAP Business One expertise. The Boomi team had the middleware skills but needed a partner who understood SAP B1 inside out — its Service Layer, data model, and business logic."

- Deep SAP Business One expertise — Service Layer, DI API, HANA data model
- Proven ability to work alongside in-house Boomi teams without friction
- Clean, documented API contracts that any middleware team can consume
- Built-in error handling and audit logging so nothing is lost or silently missed
- Full documentation and knowledge transfer — PST's team owns what was built
- Remote delivery model — no on-site costs, faster turnaround
- Reusable architecture thinking — built for scale, not just for today

9. READY TO AUTOMATE YOUR SAP B1 INTEGRATION?

If your business is running SAP Business One and you need to connect it to a retail customer, EDI network, marketplace, or any external system — Integr8 can help you get there faster, cleaner, and with less risk than any generic integration firm.

We bring the SAP B1 knowledge your middleware team doesn't have — and we leave you with a platform that scales to every customer that comes after.

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SAP Business One | Boomi | EDI | API Integration