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CONCLUSION

Mastering SAP Integration in complex B2B scenarios

From Data Silos to Digital Commerce

B2B eCommerce has become a primary revenue channel, but in many companies the success (or failure) of the initiative is decided in one place: the integration layer between the shop and SAP.

Mid-market leaders in wholesale, manufacturing and automotive often run SAP S/4HANA (or SAP ERP/ECC) as the operational backbone. That backbone represents a huge asset. It contains years of business logic for pricing, availability, order processing and customer data. At the same time, it is frequently also the bottleneck for advanced, digital B2B scenarios: SAP was not designed as a real-time, customer-facing system.

The Challenge:

Today's B2B buyers expect an experience that feels as self-service and responsive as B2C:

- Real-time pricing that reflects contracts, scales and customer-specific conditions
- Accurate availability and delivery estimates
- Account-based catalogs and permissions
- Fast reordering, self-service documents (invoices, confirmations, delivery notes)
- Consistent journeys across brands, countries and channels

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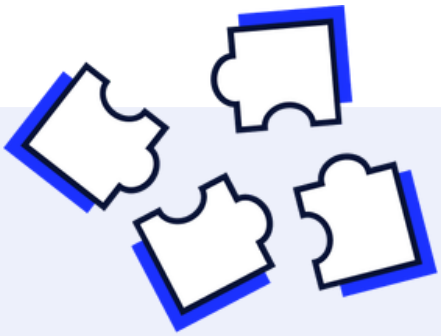

In an ERP-centric enterprise, delivering these capabilities means that nearly every key shop function “orbits” around SAP:

- **Material master data** must become commerce-ready product data
- **SAP condition technique** must drive customer-specific prices
- **SAP ATP (Available-to-Promise)** must inform availability
- Every checkout must reliably become a **sales order in SAP**

This is what we call the SAP Gravity Problem: You can’t build credible B2B commerce without SAP - but integrating at the required depth is where projects become complex, slow and risky.

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AI-Ready Commerce Starts With Integrated ERP Data

As integration becomes a strategic capability, it also enables the next transformation wave: AI in B2B commerce. AI-driven capabilities such as personalized product discovery, dynamic pricing and recommendations, predictive replenishment and automated service orchestration all depend on one prerequisite: trusted, real-time access to ERP data.

In SAP S/4HANA environments, this data exists. But it remains fragmented across system boundaries and integration layers. Without a modern integration architecture, AI initiatives are structurally limited by:

inconsistent data availability

delayed synchronization

fragmented business logic

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With a standardized integration layer (e.g. SAP BTP and Integration Suite), organizations can expose SAP data in a governed, reusable, and real-time manner across the digital ecosystem.

The 7 Biggest SAP Integration Challenges and How to Address Them

The Challenge	*The Issue*	*The Approach*
1. Master data complexity & "commerce-ready" product information	SAP material master is built for logistics and finance and not for rich content, faceted search, SEO, images or market-specific descriptions.	→ Define data ownership: what is the "system of record" for which attribute? → Establish an enrichment strategy (often: SAP to PIM → Shop) and clear governance → Standardize identifiers, units of measure, and classification logic early
2. Real-time pricing & availability	SAP pricing (condition technique) is powerful but opaque. Replicating it outside SAP is risky; calling SAP for every request can harm performance.	→ Design a deliberate balance of real-time calls vs. Caching → Use price simulation patterns where accuracy is critical → Treat availability as a product: expose SAP ATP safely
3. Customer/account model mismatches	SAP structures customer relationships via partner functions and contacts; modern commerce platforms rely on users and organizations.	→ Create a clear mapping for partner functions to shop accounts and permissions → Design for approvals, buying centers, delegated purchasing, and auditability → Implement security by design to prevent data leakage across accounts
4. Order creation is not a simple "insert"	Creating a sales order triggers checks (credit, availability, pricing, output) and can fail in many ways — which must be handled gracefully in checkout.	→ Implement an order simulation step before final creation → Design error handling, retries, and user messaging as first-class integration requirements → Support B2B realities: partial deliveries, backorders, scheduled deliveries

5. Legacy Integrations & Technical Debt	Many landscapes still run on IDOCs via file transfer, point-to-point RFC/JCo, undocumented interfaces and brittle batch jobs.	→ Don't "bolt on" a modern shop to fragile legacy interfaces → Use your commerce program as a chance to rationalize integrations and introduce observability → Create a migration path from legacy patterns to an API-first integration layer
6. Multi-Brand & Multi-Country Complexity	Increased operational complexity and scaling challenges	→ Treat organizational mapping as a data governance topic, not only a technical one → Establish rules for product/price/availability differences by market and segment → Keep integration assets reusable across storefronts
7. Governance & ownership gaps	SAP is owned by IT with different release cycles; commerce is owned by digital teams with faster iteration. Integration sits "between worlds."	→ Define ownership, escalation paths and change processes early → Plan iterative releases instead of a big-bang go-live → Treat integration as a product not a one-off project

The Modern Answer: S/4HANA + SAP BTP + Integration Suite (CPI)

Integration technology has evolved from batch-oriented IDOC exchanges to an API-first, cloud-native approach.

For many S/4HANA integration scenarios, SAP Business Technology Platform (BTP) with SAP Integration Suite (CPI) is the state-of-the-artfoundation because it provides:

- Prebuilt SAP integration content packages for common scenarios
- API-first patterns (OData/REST), transformation and orchestration
- Monitoring, alerting and operational tooling
- A future-proof path aligned with SAP's strategic direction

Key idea: make the SAP integration package the reusable asset. The commerce platform may change over time. But your SAP-side integration should not need to be rebuilt each time.

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Our 3 Step Approach:

Discovery → Detail → Deliver

1

Discovery workshop (identify the “integration inventory”)

- Map end-to-end processes: order-to-cash, product-to-publish, price-to-display, customer-to-account
- Identify required interfaces, data objects, gaps and SAP customizations

2

Detail workshop (specify each integration topic)

- Field-level mapping, semantics, transformations, error handling
- Decide standard vs custom development and where it belongs (Shop, CPI, SAP)

3

Implementation (deliver topic-by-topic)

- Prioritize high-value topics (pricing, availability, order creation, account sync)
- Test end-to-end per topic to keep a stable baseline and reduce risk

What You Can Do Next (low risk, high value)

- Identify your critical commerce journeys (reorder, quick order, checkout, service portal)
- Create an integration inventory + gap analysis
- Get a recommended target architecture (including BTP/CPI where appropriate)
- Derive a phased roadmap that avoids big-bang risk

If you are currently facing the challenge of building up a modern B2B digital landscape and in case SAP represents the backbone of your company, or if you are facing challenges with your current solution, have a look into our whitepaper and get in touch with us.

Get In Touch

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