

Jitterbit Low-Code Application Platform User Guide

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A JITTERBIT WHITE PAPER
Improve the Customer
Experience and Increase
Efficiency in Commerce with iPaaS



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Introduction

Enterprise Resource Planning (ERP) systems are an essential component of the operational framework of businesses across various sizes and sectors. ERP systems are instrumental in helping organizations manage and automate a multitude of business processes, spanning functions such as accounting, finance, invoicing, product management, materials, production planning, quality control, sales, logistics, and more.

Among the global leaders in ERP systems, NetSuite, SAP, Epicor, Microsoft Dynamics 365, and Sage stand out as prominent leaders, offering a broad portfolio of software that enables businesses to optimize their operational efficiency across the entire organization. Current market dynamics underscore the importance of ERP systems. However, companies are increasingly recognizing that maximizing their potential requires the addition of specialized systems. So, while an ERP remains essential for core operations, it may not encompass the full range of capabilities and resources needed in certain areas. As a result, specialized and dedicated systems tailored to address these specific needs have emerged.

For instance, in terms of customer service and Customer Relationship Management (CRM), businesses are investing in dedicated tools to better understand and cater to customer needs. A dedicated CRM system enables companies to track customer interactions, manage sales, and monitor critical customer data, all of which can be used to enhance customer service and loyalty.

As ecommerce strategies and channels continue to evolve, and as the market continues to mature by adopting specialized platforms for various functions, the challenge of maintaining synchronization among these critical applications has grown in complexity. This is where the use of iPaaS (Integration Platform as a Service), like Jitterbit's Harmony, has proven indispensable.iPaaS facilitates, orchestrates, and automates communication across all applications and systems within a company's infrastructure.

Integration between ERP systems and ecommerce platforms, such as Shopify, BigCommerce, VTEX, and others, ensures that data related to sales orders, inventory, pricing, and customers is consistently updated, accurate, and integrated across both systems. This enables efficient management of the order lifecycle, from the initial customer purchase to product delivery and inventory control. Furthermore, this integration elevates the customer experience by providing accurate and timely information on product availability, order status, returns, and exchanges, among other aspects.



Key challenges when integrating ERPs and ecommerce platforms

Integrating an ERP system with an ecommerce platform can be a complex undertaking. These solutions are powerful tools in their respective domains, and their integration can yield significant advantages, such as data consistency, process efficiency, and overall customer satisfaction. Here are some common challenges that organizations may encounter when approaching this type of integration without the aid of an iPaaS:



Application boundaries

ERP systems and ecommerce platforms serve distinct purposes. To get the most value out of these systems, it is crucial to integrate them while preserving their unique characteristics and objectives. Implementing processes and functions beyond the boundaries of each system can lead to unstable operations and compromise process reliability. For instance, in the context of orders, ecommerce systems are tailored to handle hundreds of thousands of requests in a short period of time; a task for which ERP systems, in general, aren't designed to handle at that scale. Adopting an integration approach that is decoupled, yet maintains data synchronization, is imperative to handle this throughput mismatch between an ecommerce platform and ERP system. Using an integration platform such as iPaaS becomes indispensable for providing assistance and mitigating potential challenges.

Real-time vs batch integration

Whether to implement real-time integration or batch processing depends on business needs. Real-time integration requires a more robust infrastructure and can be more complex to set up.

Monitoring and alerting

Establishing a resilient infrastructure for monitoring and alerting systems to detect issues in integration processes can be both expensive and time-consuming.



Inventory synchronization

Although ERP systems play a crucial role in final inventory management, they are not designed for handling the high volume of inventory queries generated in typical ecommerce scenarios. As such, it is necessary to create a copy of the ERP system's current inventory state within the ecommerce platform. This allows the ecommerce platform to temporarily manage the inventory at the time of purchase, with subsequent updates seamlessly sent back to the ERP system. Fast and continuous data synchronization becomes a fundamental requirement for the success of the operation, and to avoid issues such as overselling, stockouts, and customer dissatisfaction.

Order processing

It's crucial to ensure that orders placed through a webstore are also reflected in the ERP system. This involves automating the order flow, updating order statuses, and monitoring the shipping process. The order process needs to be resilient, preventing any loss of data during potential system instabilities or maintenance periods. The status process must be well-coordinated between the ERP system and ecommerce platform to avoid operational failures, such as improper cancellations, delivery delays, and an increase in returns, all of which could result in losses for the company.

Customer experience

Problems such as incorrect stock information, price discrepancies, and order processing difficulties can lead to customer dissatisfaction. These issues can prompt customers to question the company's reliability, particularly in the context of ecommerce. It's pivotal to recognize that customer satisfaction and feedback have a direct impact on sales and revenue results.

How iPaaS solves ecommerce integration challenges

An increasing number of businesses are turning to iPaaS solutions to minimize time to revenue in an agile, cost-effective manner.

A cloud-based, low-code integration solution, iPaaS provides a fast and easy way to connect distributed resources and build complex integrations. Jitterbit's iPaaS accelerates connectivity with an intuitive interface that lets you quickly create integrations, and management tools that let you monitor and view everything in one place. Below, we highlight the benefits of using Jitterbit's iPaaS for ERP and ecommerce platform integration:

1. Low-code integrations to boost business efficiency

Jitterbit's low-code iPaaS empowers users to create integrations effortlessly. With a user-friendly drag-and-drop interface, you can build integrations without the need for in-depth knowledge of complex authentication, authorization, communication protocols, or data formats.

2. Intuitive and UI-driven capabilities simplify data mapping

Jitterbit offers a low-code UI-based data mapping capability that simplifies the process of mapping data between an ERP and ecommerce platform. With a straightforward drag-anddrop interface, users can easily map data structures between the two systems.

3. Customization capabilities to create tailored integrations

Jitterbit's iPaaS is designed with customization in mind by providing out-of-the-box support for customization within the ERP system. Our expertise in the ERP and ecommerce space help us to develop and deliver complex data mapping based on the customer's needs.

4. Real-time and batch integrations provide greater flexibility

Jitterbit's iPaaS offers the flexibility to build both real-time and batch integrations. Through the low-code UI, you can create integration processes tailored to your specific requirements, whether requiring immediate data synchronization or scheduled batch updates.

5. Infrastructure-free environment lowers ongoing maintenance costs

One of the standout features of Jitterbit's iPaaS is its infrastructure-free approach. Businesses are relieved of the need to build and maintain any hardware infrastructure. Everything operates seamlessly within the cloud, ensuring a hassle-free and efficient integration environment.

6. Rapid API exposition enables event-driven integration

Jitterbit offers a quick process for exposing integrations as RESTful APIs through its low-code API creation wizard, allowing users to effortlessly transform integrations into accessible APIs within a matter of minutes. The ability to expose integrations as APIs opens up a world of new business possibilities. These APIs can be seamlessly invoked as webhooks from various applications and ecommerce channels, providing a dynamic

means of data exchange and interaction. This not only enhances the versatility of your integrated systems, but also allows for a more agile and responsive ecosystem, where data flows smoothly among industry leading ERP systems, ecommerce platforms, and other applications in your technological landscape.

7. Ready-to-use connectors reduce implementation costs

Jitterbit's platform offers out-of-the-box, native connectors for hundreds of applications. These connectors cover different versions and support a wide array of communication protocols like RFC, PI, and oData to simplify the integration process, making it easier and more efficient to connect with ERP systems. Using these native connectors, businesses can maximize the benefits of their ERP system integrations, regardless of the configurations or specific versions they employ. The connectors go beyond basic API calls, effectively handling sequences of actions required for various activities. This means you can trust them to manage all the necessary connections and actions, eliminating the need to delve into the complicated technical details of third-party APIs.

This automation streamlines integration efforts and ensures a seamless flow of data across ERP systems, ecommerce platforms, and other applications in your ecosystem.

8. Robust scalability ensures business continuity

Jitterbit's iPaaS offers high scalability, enabling your integrations to effortlessly change or expand alongside your company's growth or evolving integration needs. You won't need to make significant investments in additional technical resources, as Jitterbit's cloud-based architecture efficiently manages this expansion. Built-in scalability prevents potential performance issues and integration bottlenecks during periods of company growth. Additionally, Jitterbit's platform allows for precise adjustment of transaction volume with each system. This means that if the volume of transactions increases or reaches peak levels, you can exercise control over the transaction flow to the target system, reducing the risk of overloading services and ensuring the robustness of integrated systems.

9. Traceability maintains data integrity

In the world of integration, data integrity is paramount. Jitterbit's platform guarantees reliability by providing comprehensive data traceability and robust control over retries. This feature enhances resilience against errors. Even in scenarios where some integrated systems experience instability, your data remains secure and intact, eliminating the risk of data loss.

10. Comprehensive management and monitoring enables greater visibility

Jitterbit not only simplifies integration creation, but also offers robust integration management and monitoring capabilities through its Management Console — a centralized console for users to easily oversee the health of all integration projects. The Management Console allows you to track which integrations have encountered errors, which ones are issuing warnings, and which are running smoothly. Detailed information on reasons for failures and warnings is readily available, ensuring you have full visibility into your integration processes.

In addition to the built-in management console, Jitterbit offers the flexibility to monitor integrations through third-party observability tools like Splunk, DataDog, and Elasticsearch, among others. This feature extends your monitoring capabilities, allowing you to leverage your preferred tools to track and manage integrations effectively. **Jitterbit's iPaaS accelerates connectivity with an intuitive, drag-and-drop interface.**

Best integration practices to minimize time to revenue

To ensure a successful implementation, it's essential to apply industry-backed best practices. One fundamental approach is to segment the integration project into welldefined phases.

Create a detailed implementation plan

Choosing an implementation plan that deploys the entire project all at once, covering all processes, is generally not advisable. This approach not only prolongs the project without yielding tangible results, but also tends to

overload the operation during the implementation and the activation phase, increasing the risk of complications and further delays. Dividing the implementation phase into multiple deliverables enables the team to focus its efforts on the most critical processes for the business first. For ERP and

ecommerce integration, it is highly recommended that the first phase includes the processes that are impractical to perform manually — such as updating stock, processing orders, and invoicing — and are critical to ensuring operations run efficiently.

Jitterbit's platform allows you to build the entire solution using independent workflows, granting precise control of the implementation, testing, and activation of each process.

Map data to maximize platform capabilities

To expedite the implementation process, it is important to quickly make ERP system-registered products available in the ecommerce storefront. The ERP system should solely handle essential product data, information used for inventory management, and order processing, while product enrichment and the entirety of the category structure should be handled within the ecommerce platform. Opting to carry out enrichment and category structuring directly in the ERP system can negatively impact the project's time to market by needlessly increasing project complexity, as the ERP system lacks the necessary structure to manage the complete catalog enrichment.

In addition, it is vital to carry out a detailed analysis of the data that will be shared between the ERP and other business systems. This ensures that all the business rules are collected, transformed, and mapped accurately and consistently, preventing rework and delays during implementation. Standardizing nomenclature and construction is also important for guaranteeing data coherence, and to simplify implementation support.

Jitterbit's iPaaS facilitates user-friendly data mapping and the implementation of complex business rules with scripting functionality.



Align your implementation with your business strategy

Aligning ERP system parameters, including aspects like order type, organization, sales channel, and activity sector, with the company sales model prevents the occurrence of rework during implementation and integration. This helps safeguard the planning process and enable the creation of ERP system reports that provide visibility into the operation.

It is equally essential to establish all the conversion tables required for an ecommerce platform and ERP system integration in a parameterized manner. The role of the 'key/value or lookup table' mapping is to facilitate the translation of information between these two distinct systems. It defines how the data collected in the ecommerce platform environment will be related to the corresponding fields in the ERP system, and vice versa. For example, a specific payment method in an ecommerce platform can be mapped to the corresponding payment method in the ERP system, or mapping a material code within the ERP system that differs from the code for the same product in the ecommerce platform.

Jitterbit's platform enables this parameterization directly in the integration, thus generating no impact for both the ERP system and ecommerce platform in scenarios where the modification and/or addition of parameters are necessary.

Define an error-management strategy

Another crucial practice is defining a well-structured error-handling strategy. This involves implementing error detection, logging, and reporting mechanisms to ensure that any problems are identified and resolved quickly. The integration should be resilient in handling temporary failures and ensuring an uninterrupted flow of data, even in the face of unexpected problems.

Jitterbit's platform offers advanced error notifications and a dashboard for monitoring and managing all integrations.



What happens when an ERP and ecommerce integration is insufficient?



Inadequate automation and integration can lead to heightened operational costs due to the need for manual tasks. This includes labor-intensive activities like manual data entry, order tracking, and data reconciliation between systems. Performing manual work not only consumes time and resources, but also introduces a higher risk of errors.

Operational inefficiencies

Without adequate integration, operational inefficiencies and a lack of process coordination in business processes can occur. This can lead to order processing delays, delivery bottlenecks, stockouts, and a general lack of visibility into day-to-day operations.

Data discrepancies

Ineffective integration can result in inconsistent and outdated data scattered across different systems.

This can lead to issues related to data accuracy, such as outdated inventory, incorrect pricing, and obsolete customer records. Data discrepancies can compromise decision-making and negatively affect the overall customer experience.



Competitive disadvantage

In an increasingly competitive market, the absence of quick and accurate access to customer data and purchase histories can impede sales staff from seizing opportunities to offer additional relevant products or services. This can put the company at a disadvantage compared to competitors who use integrated systems effectively to enhance their operations and meet customer demands more efficiently.

Customer success story

An example of integrating ShopifyPlus to Oracle Netsuite ERP systems is illustrated by Whiskers n Paws, one of Hong Kong's leading pet needs suppliers. Whiskers N Paws needed an efficient way to replace custom-coded integrations and connect Shopify Plus, NetSuite, and other ERP systems. The integration of its new Shopify ecommerce site with their NetSuite ERP system improved efficiencies by an estimated minimum of 50 percent.

Problem: Manual data entry delays cause process bottlenecks and errors

Whiskers n Paws wanted to boost its online sales capabilities, by upgrading its online presence to the new Shopify Plus Online Store to be built on the new Dawn theme – which leverages all of Shopify 2.0's new features.

The key challenge for the company was finding the most efficient way to integrate the new Shopify Plus platform and its associated applications with their existing Oracle Netsuite ERP systems – with minimum disruptions and

virtually no downtime. Their previous integration between Magento and NetSuite had been custom-built by the organization's in-house developers, but they were not familiar with Shopify.

Solution: Connect commerce touchpoints from Shopify's front-end marketplace to NetSuite and back-end systems

Jitterbit's integration solution for Whiskers N Paws, connected all commerce touchpoints from Shopify's frontend marketplace to the back-end ERP and finance systems, providing a single source of truth of customer data to deliver a personalized and frictionless commerce experience. Pre-built connectors reduced deployment time and made in-house implementation feasible and simple at a low cost.

Outcome: Whiskers N Paws saves 150 monthly hours, HK\$180K, and 2 months of integration time For Whiskers N Paws, the immediate benefit of its partnership with Jitterbit was the quick, hassle-free, and seamless integration of its new Shopify ecommerce site with their existing back-end processes, including inventory, order, delivery, and financials. The flexibility and scalability of Jitterbit's integration platform also helped ensure workflows and efficiencies continued throughout the transition period and beyond.

Whiskers N Paws has been able to save 150 hours per month by eliminating manual data entry including:

- Connected Shopify Plus and NetSuite with other key ERP and business systems
- Eliminated errors and process bottlenecks with data integration
- Enabled customers to handle things on their terms, with their channel of choice
- Built more brand awareness via an enhanced customer shopping experience
- Increased customer satisfaction by an estimated 80%
- Accelerated digital transformation and growth by enabling IT staff to add more applications to their tech stack simply and easily

"One great thing Jitterbit has done for Whiskers N Paws is help streamline our entire operation and set us up for further expansion in the years ahead. We are now looking at additional ecommerce websites and spheres of operation and we will go forward with Jitterbit to ensure smooth operations and a single source of data truth," says Hades Kong, Head of Solutions.

Embark on an effortless integration journey with Jitterbit's iPaaS

Often, companies will underestimate the complexity of integration processes and neglect the use of fit-forpurpose tools. In such cases, companies discover that integration encompasses far more than just data connectivity, involving other key elements such as infrastructure, scalability, reliability, maintenance, monitoring, evolution, traceability, and adaptability.

These facets are expertly addressed by specialized integration tools like Jitterbit's iPaaS — elements that can be overlooked in non-platform-based integration approaches.

Jitterbit's user-friendly, low-code platform significantly reduces the cost of creating, managing, and maintaining integrations with its rapid and efficient integration capabilities. This increases ROI from integration efforts and accelerates time to market, enabling companies to swiftly implement strategies and adapt to a dynamic landscape. As businesses continue to meet integration challenges, Jitterbit stands as a reliable integrating partner for achieving cost savings, lasting value, and a competitive advantage.

Integrating systems with an iPaaS is a key strategy for companies seeking a substantial return on investment (ROI) and expeditious project execution.





Jitterbit empowers businesses to optimize their connectivity and scalability through a single integration and workflow automation platform.

Our mission is to turn complexity into simplicity so your entire organization can work faster and more efficiently. Jitterbit, Inc. • jitterbit.com

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Documents / Resources



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