

A JITTERBIT WHITE PAPER

SAP + VTEX Integration

Decreasing Ecommerce Time to Revenue with iPaaS



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Introduction

Enterprise Resource Planning (ERP) systems play a fundamental role in the operations for businesses of all sizes and industries. These 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 solutions, SAP stands out prominently, offering a broad portfolio of software that enables businesses to centralize and 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 ERP remains essential for core operations, it may not encompass all the capabilities and resources needed in certain areas. As a result, specialized and dedicated systems and solutions 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 has become an integral part of business sales strategies, and as the market continues to evolve 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, like SAP, and ecommerce platforms, like VTEX, ensures that data related to sales orders, inventory, pricing, and customers is consistently updated 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.

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Key challenges when integrating ERPs and VTEX

Integrating an ERP system such as SAP with the VTEX platform can be a complex undertaking. Both SAP ERP and VTEX 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

One of the primary challenges is for the organization to understand that each of these systems (SAP and VTEX) serves 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 ecommerce and ERP. Using an integration platform such as iPaaS becomes indispensable for providing assistance and mitigating potential challenges.



Diverse data structures and protocols

ERP and ecommerce systems frequently employ distinct data structures and communication protocols for storing and exchanging information. For example, SAP relies on technologies such as Remote Function Call (RFC), Business API (BAPI), and IDOC, while VTEX utilizes the REST API. Bridging these technology differences and ensuring reliable integration can pose a significant challenge. Additionally, given that SAP and VTEX often have different data structures and formats, mapping and transforming data between the two systems can prove especially arduous. This complexity becomes even more apparent when dealing with intricate product catalogs, inventory data, and customer information.



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.



Customizations

SAP provides Business Application Programming Interfaces (BAPIs) to streamline integrations and enable process automations. Typically, these interfaces are customized to accommodate various business rules of the client's operation. Therefore, in SAP integration projects, most processes commonly do not use standard interfaces (Standard BAPIs), resulting in increased integration complexity.



Inventory synchronization

Although SAP plays a crucial role in final inventory management, it is 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 SAP'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 synchronized back to SAP. 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

Ensuring that orders placed on VTEX are reflected in SAP is also crucial. This involves automating the order flow, updating order status, and monitoring the shipping process. The order process needs to be resilient, preventing any loss of order data during potential system instabilities or maintenance periods. The status process needs to be well-coordinated between SAP and VTEX 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 important to recognize that customer satisfaction and feedback have a direct impact on sales and revenue results.

How iPaaS solves these challenges

An increasing number of businesses are turning to iPaaS (Integration Platform as a Service) solutions to minimize time to revenue in an agile and 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 see everything in one place.

Below, we highlight the benefits of using Jitterbit's iPaaS for SAP and VTEX integration:

01 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.

02 Intuitive and UI-driven capabilities to simplify data mapping

Jitterbit offers a low-code UI-based data mapping capability that simplifies the process of mapping data between SAP and VTEX. With a straightforward drag-and-drop interface, users can easily map data structures between the two systems.

03 Customization capabilities to create tailored integrations

Jitterbit's iPaaS is designed with customization in mind. It provides out-of-the-box support for customization within the SAP system, allowing users to implement integrations with custom Business APIs (BAPIs), Remote Function Calls (RFCs), and Intermediate Documents (IDOCs) without requiring extensive expertise.

04 Real-time and batch integrations to 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.

05 Infrastructure-free environment to lower 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.

06 Rapid API exposition to enable event-driven integration

Jitterbit offers a quick process for exposing integrations as RESTful APIs through its low-code API creation wizard. This functionality allows you to effortlessly transform your integrations into accessible APIs within a matter of minutes.

The ability to expose integrations as APIs opens up new possibilities for your business. 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 SAP, VTEX, and other applications in your technological landscape.

07 Ready-to-use connectors to reduce implementation costs

Jitterbit's platform offers out-of-the-box, native connectors for more than 200 applications, including VTEX and SAP connectors. 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 SAP systems. Using these native connectors, businesses can maximize the benefits of their SAP 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 the connectors 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 SAP, VTEX, and other platforms in your ecosystem.

08 Robust scalability to ensure business continuity

Jitterbit's iPaaS seamlessly combines scalability and reliability to ensure a dependable integration between your SAP system and the VTEX platform.

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 (SAP or VTEX), reducing the risk of overloading services and ensuring the robustness of integrated systems.

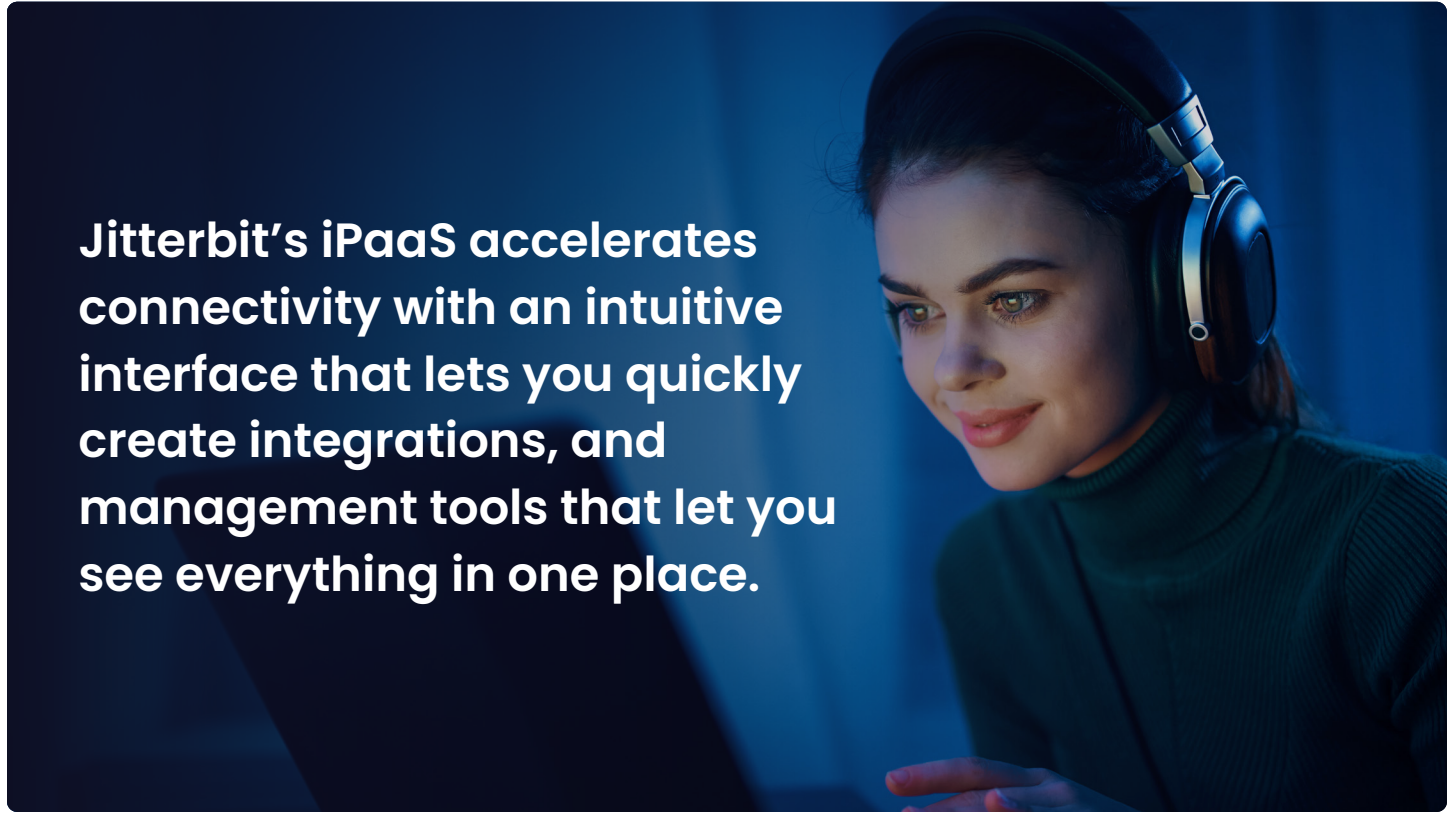
09 Traceability to maintain data integrity

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 to enable 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 interface that lets you quickly create integrations, and management tools that let you see everything in one place.

Best integration practices to minimize time to revenue

To ensure a successful and agile implementation, it's essential to apply best practices that promote an efficient process without setbacks. One fundamental approach is to segment the integration project into well-defined 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, thereby 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 an SAP and VTEX integration implementation, 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 SAP and VTEX capabilities

To expedite the implementation process, it is important to quickly make SAP-registered products available in the VTEX storefront. SAP 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 directly within the ecommerce platform. Opting to carry out enrichment and category structuring directly in SAP can negatively impact the project's time to market by needlessly increasing project complexity, as SAP 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 systems. This ensures that all the business rules are collected, transformed, and mapped accurately and consistently, preventing rework and delays during the implementation phase. Standardizing nomenclature and construction is also essential to guarantee the coherence of the data at all stages of the integration, 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

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

It is equally essential to establish all the conversion tables required for VTEX and SAP 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 VTEX environment will be related to the corresponding fields in SAP, and vice versa. For example, a specific payment method in VTEX can be mapped to the corresponding payment method in SAP, or mapping a material code within SAP that differs from the code for the same product in VTEX. Jitterbit's platform enables this parameterization directly in the integration, thus generating no impact for both SAP and VTEX in scenarios where the modification and/or addition of parameters are necessary.

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.



By choosing Jitterbit's iPaaS and adhering to these best practices for the integration between SAP and VTEX, you can accelerate the implementation process up to 10 times faster than manually coding integrations.

What happens when your ERP and Ecommerce integration is insufficient



Elevated labor costs

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.



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.



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.



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.



Electrolux, a global leader in home appliances, faced a logistical challenge: improving carrier management to meet the increasing demand for its products. In particular, they were struggling to effectively manage and optimize the capacity of their delivery carriers. This called for a strategy shift, recognizing that different carriers had unique capacities, routes, and schedules.

Problem: Lack of visibility into order carrier capacity

Electrolux's primary challenge was to find a way to balance the capacity of each carrier when assigning orders, making the most of the available capacity, and avoiding carrier overload in periods of high order volume.

Solution: Solving omnichannel integration challenges with Jitterbit's iPaaS

Using VTEX's cost-benefit rule, a business logic framework was established to efficiently distribute orders among carriers without altering the orders themselves. The objective was to prevent carrier overload through integration rules. The resolution to this logistical challenge materialized with the implementation of Jitterbit's iPaaS platform. A workflow process was built to monitor order distribution by carrier during the integration of orders between VTEX and SAP. In this instance, specific rules are applied to approved orders. When a carrier reaches its maximum capacity, the system initiates a deactivation process and checks whether another carrier could serve the same region. If there is no alternative, the original carrier remains active, and the system issues an email alert to responsible parties.

Outcome: Faster delivery times and more precise resource management

This implementation resulted in a significant reduction in the average delivery time for ecommerce orders by two days. In addition, the company achieved a substantially improved logistics operation, reducing delivery times, improving operational efficiency, generating significant cost savings, and reducing the need for labor—all while enabling more precise resource management. Jitterbit's iPaaS technology was pivotal in Electrolux's success in addressing its logistical challenge with agility and intelligence.

After achieving remarkable success in its operations in Brazil, the partnership between Jitterbit and Electrolux is now expanding its reach to other countries in the Americas, including the United States, Argentina, Chile, Peru, Colombia, Ecuador, and Puerto Rico. This success story demonstrates how technological innovation and intelligent integration can bestow a significant competitive advantage on companies operating in an ever-evolving global marketplace.



A notable example of successful integration between the VTEX ecommerce platform and the SAP system is illustrated by Swift, a leading global frozen foods brand. The company employed integration to boost its ecommerce operations and enhance the customer experience. The ecommerce operation resulted in a significant increase in Swift's revenue, solidifying its position as a standout entity within the JBS group. This new sales channel drove an impressive growth of 200 percent.

Problem: Lengthy data integration delays hindered seamless omnichannel customer experience

Swift aimed to deliver a high-quality omnichannel experience by seamlessly connecting the VTEX ecommerce platform, the SAP ERP system, and its physical stores. The goal was to ensure a uniform experience for customers, regardless of their chosen purchasing channel, whether it was online ordering or in-store pickup, within minutes. The most significant challenge was the extended time required to integrate data into each of the process systems. Prolonged integration processes posed a threat to the customer experience, potentially leading to abandoned carts and customer dissatisfaction.

Solution: Omnichannel integration with Jitterbit's iPaaS solution

To tackle this challenge, Swift integrated VTEX with SAP by harnessing the power of Jitterbit's integration platform. This strategic choice facilitated continuous communication between the two systems, resulting in a significant improvement in order delivery times and a drastic reduction in integration time. This integration enabled seamless sharing of order data and inventory, pricing, and customer information, even in scenarios with substantial data volumes.

Outcome: Better experiences, more process efficiency, and fewer errors

The VTEX-SAP integration elevates Swift's omnichannel excellence, minimizes errors, and boosts customer satisfaction, demonstrating the critical role of ecommerce and ERP integration in retail success.

- **Accuracy and efficiency:** The integration has eliminated manual errors and reduced the time required to update information in both systems—from 20 minutes to less than three minutes.
- **Enhanced inventory management:** Swift can now track inventory more accurately and avoid situations of stockouts or excess inventory.
- **Customer experience:** Customers can view real-time stock information, ensuring that products are available before purchasing. Additionally, the quick preparation of products for in-store pickup after online order integration enhances the customer experience.
- **Increased number of orders by 275%:** In 2019, Swift averaged 200 orders per day, but with the integration of these platforms, the company expanded its operations and now achieves an average of more than 1,300 orders per month exclusively in the online environment.

Embark on an effortless integration journey with Jitterbit's iPaaS

Integrating systems using Jitterbit's iPaaS platform is a pivotal strategy for companies seeking a substantial return on investment (ROI) and expeditious execution of projects. When implementing a VTEX ecommerce platform, a phased approach yields early results and optimizes deployment and maintenance costs. To achieve an accelerated implementation and tangible cost savings, automating data integration with iPaaS becomes paramount.

A common pitfall is underestimating the complexity of integration processes and neglecting the use of fit-for-purpose tools. In such cases, companies often 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.

Integration also infuses precision and reliability in data connectivity, contributing to stronger and more accurate decision-making. Plus, access to consistent, up-to-date information empowers companies to streamline operations, enhance operational efficiency, and focus on their core business, maximizing ROI over the long term.

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's iPaaS stands as a reliable partner in achieving cost savings, lasting value, and a competitive advantage.

About Jitterbit

Jitterbit empowers business transformation with low-code enterprise solutions for integration and application development. Jitterbit combines and simplifies the power of iPaaS, APIM, EDI, and LCAP to amplify the value of on-premise, cloud-based, and SaaS systems and accelerate the digital journey. Organizations around the globe rely on Jitterbit's experience and expertise to help them automate critical business processes and build applications to futureproof their business. Learn how Jitterbit helps people work happier at www.jitterbit.com or follow us on [LinkedIn](#).



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