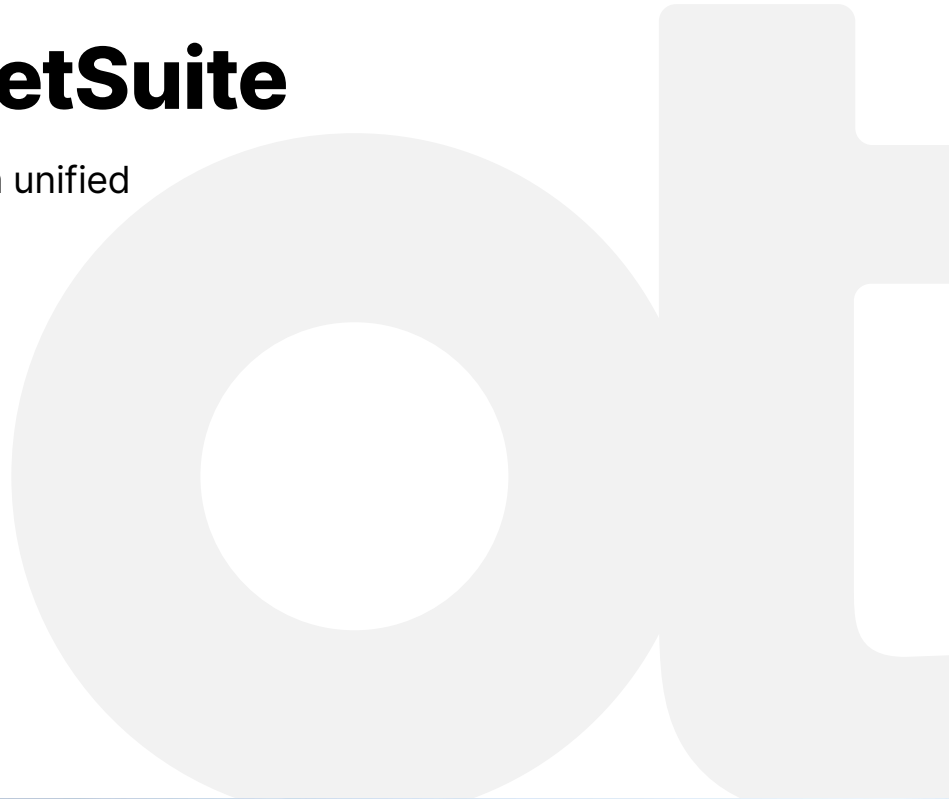


Integrating NetSuite

Streamline your business with a unified integration strategy



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Executive summary

Adoption of cloud computing combined with the growing and increasingly diverse requirements around digital transformation initiatives are redefining ERP integration. Monolithic, on-premises ERP megasuites are being replaced by varying combinations of loosely coupled and more purpose-built cloud applications. Traditional enterprise integration tools fall short of supporting these evolving requirements. At the same time, there is an increased need for digitizing and automating business processes involving varying systems and data.

These developments put significant strain on organizations' integration operations. Not only do they need to deploy modern integration technologies to keep up with changing requirements, they must also optimize project staffing and ongoing operations in an increasingly diverse and dynamic environment. Few integration teams would agree that they have sufficient budgets for managing all these requirements. Limited resource availability often causes delays in project scheduling or even inability to complete projects. Pressures around project delivery can also lead to disparate and suboptimal integration design, causing issues such as gaps in functionality or high maintenance costs.

As the brain of operations for most organizations, ERP systems have a central role in integration needs and NetSuite®, one of the leading cloud-based ERP systems, provides an example of what modern ERP integration requirements can look like. The system provides native integrations within its cloud application ecosystem, which makes the covered integration flows easy to deploy. Through its partners, the company has also extended the prepackaged integrations to cover some of the more popular third-party business applications, such as Salesforce®.

But developing integration flows that are not covered by the prepackaged integrations is an expert task that requires modern integration technology and solid understanding of NetSuite's own JavaScript-based scripting language and its SOAP and REST APIs. Integration platforms can mask some of the underlying complexity, but many organizations find themselves in need of these capabilities to deliver the desired levels of process automation and data consistency across their operations. In addition, the API-based connectivity often needs to be blended with more traditional connectivity methods, particularly when connecting to external systems such as those of suppliers, customers, logistics providers and banks.

As they face increasingly diverse and dynamic requirements, organizations need modern integration solutions that are cost-efficient, support their requirements, enable agility and scale with their business.



Introduction: Evolving ERP systems have created a need for unified integration

Integrating data across applications and systems is a vital part of most digital business initiatives. In many cases, these integrations involve the organization's ERP system, which has a central role in automating business processes and providing visibility into operations. However, the nature of ERP integration is changing, and the traditional approaches are no longer sufficient for serving the increasingly diverse requirements. To bridge the gaps left by disparate legacy technologies and enable modern, end-to-end process automation, a unified approach to integration is needed.

Cloud adoption drives complexity

One of the key drivers for the shifting nature of ERP systems is cloud adoption. Gartner predicts that by 2026, spending on public cloud services will exceed 45 percent of all enterprise IT spending, up from less than 17 percent in 2021.¹ In terms of ERP systems specifically, the market for cloud ERPs is expected to grow at a compound annual growth rate (CAGR) of 12.53 percent between 2023 and 2030.² According to a 2022 survey, 97 percent of companies deploying a new ERP considered a cloud-based solution, with 55 percent doing so exclusively.³ Cloud adoption has typically been more prevalent among small and mid-sized businesses, but large enterprises are also now making the move towards cloud.

As once monolithic, on-premises ERP application suites are being replaced by combinations of specialized cloud applications, integrating the ERP with other systems has become significantly more challenging. Not only are extended ERP functionalities being spread across loosely coupled, independently designed applications, the number of integration endpoints and the performance requirements placed on integration flows have also grown drastically. Highlighting this challenge, the average large organization leverages 187 applications to support its business.⁴

Not all of these applications have to be integrated, of course, but the number is on the rise. It also excludes the diverse data exchange that takes place between an organization and its external ecosystem, which plays an increasingly important role.

If left unaddressed, challenges around ERP integration often result in suboptimal process orchestrations and siloed enterprise data, which can lead to failed digital transformation initiatives, high operating costs and missed opportunities. The impacts can include anything from losing sales or paying higher fees on freight services and goods purchased to making investment and budgeting decisions based on flawed or partial information.

The changing nature of the ERP system can be observed across industries, but its impact on integration complexity can vary greatly based on the size of the organization, number of connected applications and systems and the level of customization of business processes in each organization.

1 Gartner, Gartner Says Four Trends Are Shaping the Future of Public Cloud. (2021)

2 Verified Market Research, Cloud ERP Market Size And Forecast. (2022)

3 Software Path, 2022 ERP Software Report. (2022)

4 Okta, Businesses at Work 2022 Report. (2022)

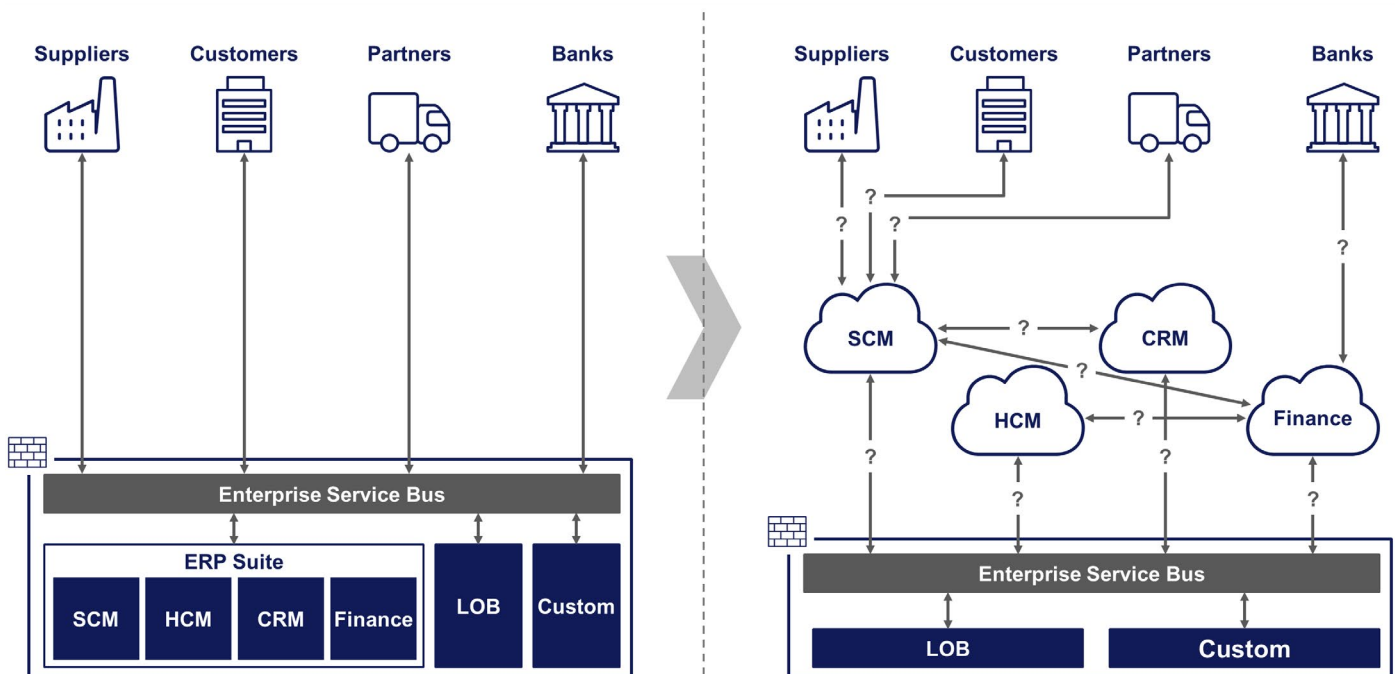
“Traditional tools used for ERP integration... are ill-suited for the more modern integration use cases driven by the changing enterprise application landscape.”⁵

Seizing new opportunities requires modern integration capabilities

These changes in the enterprise application landscape provide many benefits for organizations, including cost-efficiency, ease of use and improved flexibility in choosing best-of-breed applications for specific business needs—as opposed to being heavily tied to single vendor ecosystems. In line with this development, traditional ERP providers including SAP®, Oracle® and Microsoft® have been evolving their offerings to remain competitive. Examples include the broad set of cloud applications now offered by SAP and the acquisition of NetSuite by Oracle.

However, traditional tools used for ERP integration, such as ESB (Enterprise Service Bus) platforms and other enterprise application integration middleware, are ill-suited for modern integration.⁵ Modern requirements typically include orchestrating complex API-based synchronous and asynchronous integration flows across multi-cloud environments to address challenges caused by the increasing information sprawl and growing number of data silos.

The result is a growing need for integration technology modernization. However, organizations often lack an overarching strategy for integrating their business applications to automate processes and achieve broad data consistency across key systems. This can lead organizations to acquire disparate integration tools with overlapping capabilities and fragile point-to-point solutions, along with poor utilization of integration resources, lack of agility in developing new integrations, further information sprawl and silos and costly integration support and maintenance.



Replacing ERP megasuite functionalities by adopting specialized cloud applications provides many benefits for organizations. However, it also drives the need for modernizing integration solutions.

5 Gartner, Create a Future-Proof Integration Strategy for Your ERP. (2020)

Integration needs to be addressed in a strategic and unified way

Treating ERP integration as an afterthought, separate from ERP system modernization and deployment projects has never been a good idea. However, in the increasingly connected digital world where constant change is a fact of life, it creates a significant risk for organizations, hurting not only their cost optimization efforts but also their ability to innovate and differentiate themselves from competition. What organizations need is a unified integration strategy ensuring that all relevant integration use cases can be managed using a standardized and well-governed approach. This is exemplified by the concept of a “hybrid integration platform,” which was coined by Gartner some years ago.⁶ Other analysts have also presented their own interpretations of the underlying ideas.

These concepts typically recognize not only the need for supporting various kinds of integration scenarios but also the paramount role of coordinating integration activities. Without effective coordination and governance, organizations risk accumulating overlapping integration solutions and vast amounts of custom code that is extremely challenging to maintain. The latter tends to become a major issue particularly when organizations use open-source frameworks to support their integration requirements.⁷

The key to addressing these challenges lies in finding an optimal balance between centralized control and agility in delivering integrations. The inability of corporate IT teams to quickly meet expectations of the lines of business often leads to shadow IT, while building agile in-house capabilities for efficiently managing dynamic integration requirements is often challenging. Therefore, complementing an organization’s internal integration team with partners can be a good option for extending capabilities. For example, leveraging a managed services provider allows organizations to scale up their ability to deliver integration projects while maintaining governance through shared delivery models, SLAs, reporting and other arrangements.

Regardless of the delivery model and technology choices, integration needs to be a strategic consideration in an organization’s business application strategy. Use cases around connecting the ERP with other business applications and with trading partners are among the most important tasks that it underpins.

⁶ Gartner, Use a Hybrid Integration Approach to Empower Digital Transformation. (2018)

⁷ Gartner, How to Justify Strategic Investments in Integration Technology. (2019)

“With 32,000 customers in more than 200 countries⁹ NetSuite is the go-to choice for many organizations particularly in the small to mid-sized segment.”

NetSuite as a window into the world of cloud ERPs

Most ERP vendors are heavily promoting cloud deployment options, but many organizations are still opting for a hybrid or on-premises deployment. The leading reasons for not choosing a cloud-based ERP according to one recent study were the perceived risks around security breaches, followed by risks around data loss and connectivity challenges.⁸

But a cloud-native ERP system brings many benefits to an organization. Due to its pioneering status and broad global adoption, NetSuite is an ideal example of these benefits. Established in 1998 and acquired by Oracle in 2016, NetSuite is a pioneer of cloud ERP solutions and one of the leading providers in this space. With 32,000 customers in more than 200 countries,⁹ it is the go-to choice for many organizations, particularly in the small to mid-sized segment. It delivers benefits including continuous updates centrally provided through the cloud platform, elimination of infrastructure-related costs, virtually unlimited scalability, quick and flexible solution deployment and embedded realtime analytics.

Like most other ERP providers, NetSuite provides additional functionalities to complement its core ERP offering. These are delivered through additional cloud applications that support business processes in areas including customer relationship management (NetSuite CRM+), human capital management (SuitePeople), service business management (OpenAir) and omnichannel commerce (NetSuite Commerce). While the concept seems familiar, options provided for integrating these applications, particularly with third-party systems reveal a fundamental difference between the modern cloud ERP and the traditional monolithic ERP suites.

Integrating NetSuite ERP with other applications and systems

NetSuite provides native integrations within its cloud application ecosystem to enable interoperability and sharing of common data elements. It also partners with some third-party integration platform vendors to enable prepackaged integration capabilities for connecting some of the more popular business applications, such as Salesforce. In addition, the company provides a platform called SuiteCloud that enables integrating its applications with other systems. With SuiteCloud, developers can also customize various applications and build new custom apps or extensions to complement the standard offering, which they can commercialize on the company's SuiteApp.com marketplace.¹⁰

Integration capabilities provided under SuiteCloud are enabled by developer tools such as workflow management (SuiteFlow) and web services (SuiteTalk). Most developers working with SuiteCloud need a good understanding of NetSuite's own JavaScript-based scripting language called SuiteScript, which can be complemented by leveraging custom-coded RESTlets or Suitelets that add further flexibility into integration development. The SuiteTalk web services include both SOAP and REST based APIs. With a capability called SuiteAnalytics Connect, NetSuite can also be configured as a data source for external business intelligence and analytics tools.

⁸ Panorama Consulting Group, The 2022 ERP Report. (2022)

⁹ NetSuite, Company Overview

¹⁰ Oracle NetSuite, SuiteApp.com Marketplace

“Going beyond the native integration capabilities provided by NetSuite remains a task that usually requires specialist skills.”

Integration platform providers usually simplify connectivity to popular applications, such as NetSuite ERP, by prepackaging connectors for the provided APIs to manage the underlying complexity in a standardized and well-governed way. Nevertheless, going beyond the native integration capabilities provided by NetSuite remains a task that usually requires specialist skills.

While complexity is often an inherent part of NetSuite ERP integrations, the company’s development of standardized APIs—first with SOAP and more recently with REST—highlights the fact that enabling open and ubiquitous connectivity of the ERP with other systems, regardless of who developed them, is a necessity for modern software providers. The same path that the company has taken—under ownership by Oracle—to embrace the world of APIs is also being tread by other ERP vendors. This can be considered tangible proof of how the market is moving away from application megasuites and towards more loosely coupled business application portfolios made up of specialized best-of-breed systems.

Keeping NetSuite integration operations organized

While the native and prepackaged integrations provided by NetSuite may suffice for some organizations, many will find these too limited for supporting their increasingly diverse and digitalized business processes.

Integration development that goes beyond the prepackaged integrations requires both a modern integration platform and specialist skills to wield it. This may include, for example, developing integration flows that need to address complex data transformations or data validation to maintain—or even improve—the quality of data that enters the ERP system. Particularly, integrations that involve external data sources, such as supplier or customer systems, benefit greatly from using an integration platform that can act as an “ERP firewall” that mitigates and resolves issues related to data that originates in systems outside the organization’s direct control.

In addition to technical capabilities and skills, ensuring that the organization’s integration operations are appropriately governed is equally important. Organizations that do not want to invest heavily in their own integration center of excellence but instead rely on external consultants and system integrators often find themselves with a highly fragmented and costly integration solution portfolio. Most organizations that have been in business for a while are familiar with this and know the pains related to maintaining custom code and point-to-point integrations running on disparate platforms with varying levels of documentation. Issues emerging from this often extend beyond the IT team, causing various business impacts.

Therefore, having a solid integration strategy that enables flexibility and scalability of cost-efficient, coordinated integration delivery across use cases is extremely important. With regards to NetSuite, the IT team should leverage the efficiency of the system’s native integration capabilities, but also complement these with a solution that can fill the gaps where needed without resorting to many disparate integration tools and platforms.

Use case: Integrating NetSuite to enable O2C process automation

As an example of integration flows that most organizations need, but due to their nature often require adaptation and specialist skills, let us consider automation of an organization's O2C (order-to-cash) process when using NetSuite ERP. The use case may have many variations depending on the complexity of the process and the capabilities and preferences of the ecosystem partners to be connected, but at its simplest, it involves receiving purchase orders and sending invoices.

Overview

In this example, a CPG (consumer packaged goods) company has automated its inbound purchase order and outbound sales invoice document flows with one of its customers, a retailer. In addition, they are sending shipping orders to a logistics provider directly from NetSuite to support the order fulfilment process. The company uses a cloud integration platform to orchestrate and execute the required integration flows, as well as to perform additional data validations and offer visibility for its business users into the data movement.

Purchase orders and invoices

Purchase orders are received as EDI messages (e.g. ANSI X12 850 or EDIFACT ORDERS) from the retailer over an SFTP connection—or alternatively using another communication protocol—and translated into NetSuite's native JSON data format, which is passed on to the system using the SuiteTalk REST API.

Invoices, in turn, are generated and submitted by business users in NetSuite. Submitting an invoice starts an integration flow that communicates the invoice data in the system's JSON format to the integration platform. Invoice data is then validated and transformed into an EDI document (e.g. ANSI X12 810 or EDIFACT INVOIC) that is the preferred format used by the retailer. Finally, the EDI invoice is delivered to the retailer, in this case over an SFTP connection.

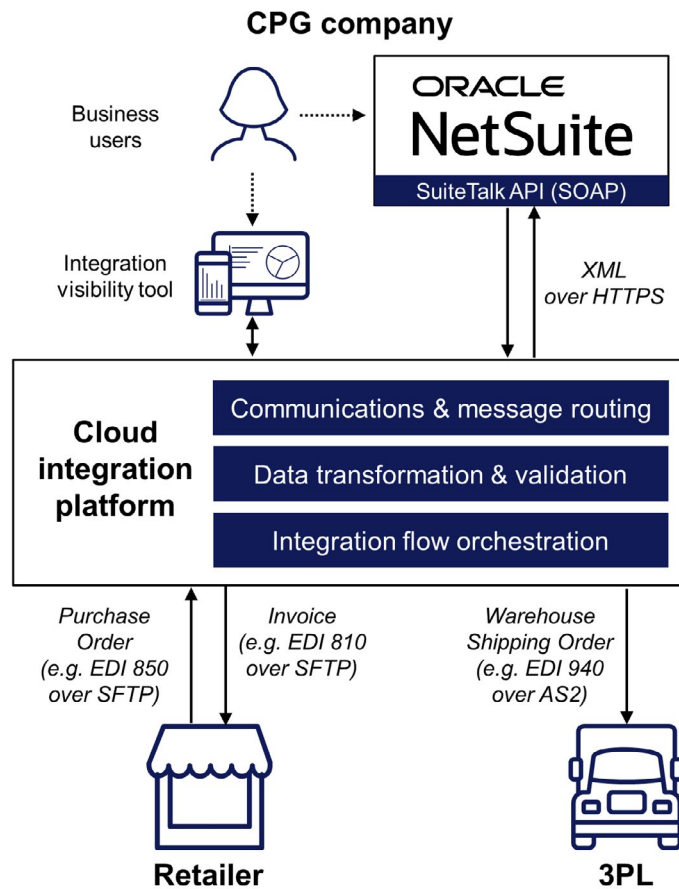
Warehouse shipping orders

In addition to purchase order and invoice exchange, the CPG company has automated sending warehouse shipping orders to a 3PL (third-party logistics) provider to support automation of its order fulfilment process. Again, submitting the shipping order in NetSuite kicks off an integration flow that delivers the shipping order in the system's JSON format to the integration platform using the SuiteTalk API. The JSON data is transformed into an EDI message (e.g. ANSI X12 940), which is then delivered to the 3PL provider, for example, over an AS2 connection or another protocol depending on their preferences.

User interaction

As orders are received and processed and invoices and shipping orders are sent, business users can access up-to-date information and process status in NetSuite. In addition, they can view more detailed information on the overall process as well as the individual messages in an integration visibility tool that provides a realtime view into the data flowing through the integration platform.





Sample integration flows between NetSuite and external systems to enable O2C process automation

In addition to the above example, O2C process automation often encompasses complementary data flows, such as order confirmations, shipping notifications, status updates and remittance advice, which enrich the business process. Take all relevant integration flows and apply them in an ecosystem that spans hundreds of customers and dozens of logistics providers, and the complexity of managing integrations related to O2C automation while adapting to the specific preferences of each trading partner becomes apparent.

NetSuite integration considerations

NetSuite customers that want to integrate their trading partners or business applications not supported by the available native integrations need an integration solution that extends their capabilities in a flexible, efficient and well-coordinated way. This often requires a modern, unified integration platform that supports different integrations patterns, such as synchronous API calls, message-based integrations like EDI document exchange, and secure file transfers.

However, technology is only a part of the solution. Maintaining consistent integration development practices, such as integration documentation and testing frameworks, and ensuring appropriate integration monitoring and error

resolution processes is equally important. This requires integration experts with various skills working efficiently together. Yet, solving the equation so that all requirements are met within budget can be challenging. Organizations should have a clear strategy for ensuring access to sufficient talent, which may involve leveraging strategic partners to extend the capabilities of the internal IT organization.

Finally, organizations should ensure the scalability of their integration solutions to avoid costly replacement projects down the line. Many NetSuite customers are small or mid-sized organizations with high growth ambitions. As their business grows, they may need to accommodate new types of integration requirements due to greater diversity of—and deeper integration with—trading partners, expansion into new regions and sales channels or changes in technical standards and regulations.

Integration solutions used by large enterprises typically offer great flexibility and scalability to address these challenges, but they may be too expensive for companies that are still on their growth journey. Most mid-market integration solutions, on the other hand, offer a lower price point but are typically limited in their ability to support high transaction volumes, increased diversity of partners and multinational business operations. Organizations should therefore look for a solution that not only meets their requirements today and fits into their budget but can also offer a reliable and efficient approach for scaling up as their business grows.

Conclusion

Digital transformation initiatives and the evolution of ERP systems drive the need for well-coordinated, agile and cost-efficient integration operations in organizations. As one of the leading cloud ERPs, NetSuite is an ideal example of this development, showing us what integrating a modern ERP can look like.

Increasingly, ERP functionalities are no longer bolted on as modules to the side of an ERP megasuite, but delivered via loosely coupled cloud applications. While ERP vendors, including NetSuite, do their best to enable easy interoperability across these applications by providing prepackaged integrations, these are often not enough to deliver the desired level of process automation and data consistency across the organization's broader system landscape.

Integrating the modern ERP typically involves developing integrations flows across various cloud-based systems using REST and SOAP APIs that go beyond the prepackaged integrations, while still needing to adapt to the more traditional connectivity methods, particularly with ecosystem partners. This requires modern integration technology that is flexible enough to accommodate various integration patterns and use cases. However, technology by itself will not deliver results, as it must be wielded by skilled experts following well-defined processes.

Efficiently managing an organization's overall integration operations can be challenging, particularly when integration requirements are dynamic. For example, if integration project staffing needs—both the number of FTEs and availability of different skills profiles—fluctuate from quarter to quarter or even month to month, it can be hard to maintain a team that is the right size and includes all the required skills.

Resources

Learn more about [OpenText B2B Integration Foundation](#) for any size business ›

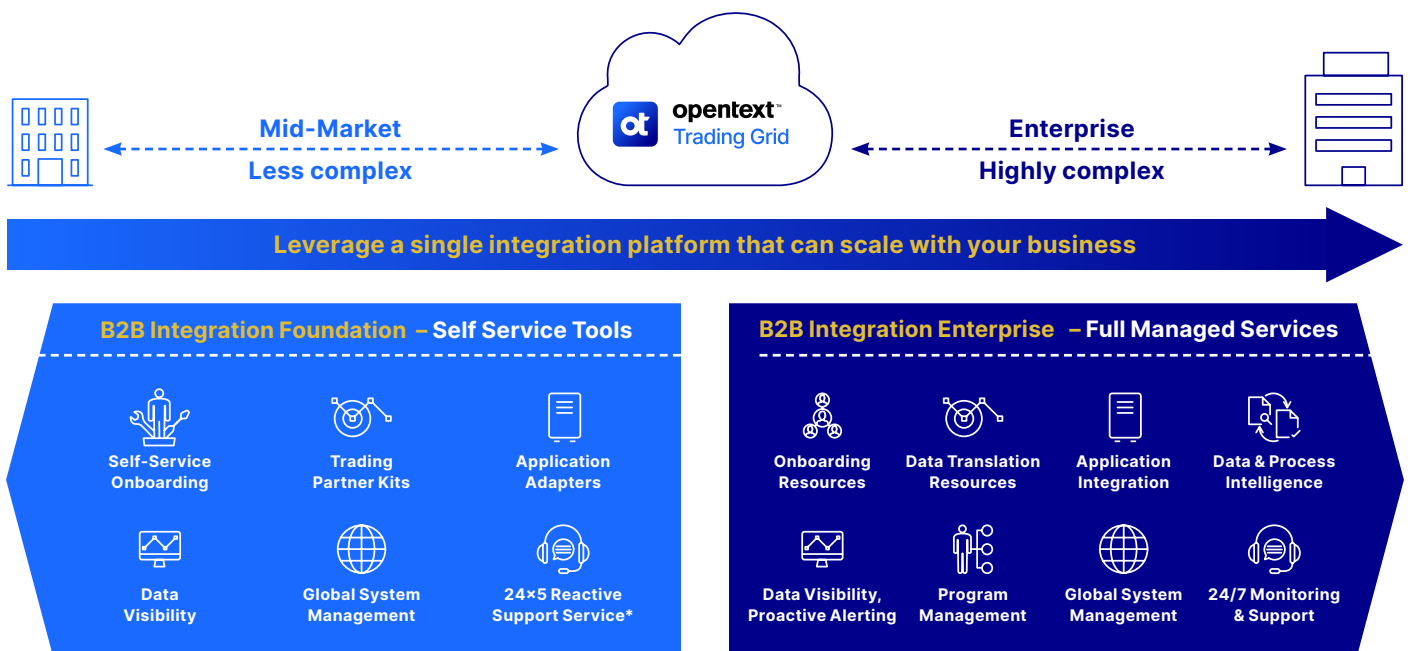
Learn more about [OpenText B2B Integration Enterprise](#) for complex integrations ›

Both the technical capabilities and the integration operations also need to scale with the business. Therefore, it is not enough to only consider today's requirements. Any decision should also take into account business growth objectives and how they may impact future requirements. A successful integration strategy makes the organization more agile, helps deliver projects faster and lowers total cost of ownership across its integration solutions.

OpenText integration solutions

All OpenText integration solutions leverage OpenText™ Trading Grid™, a modern, unified cloud integration platform, that allows companies of any size to seamlessly integrate with more than one million pre-connected trading partners, including suppliers, logistics carriers, distributors and financial institutions located anywhere in the world. This helps simplify and accelerate the digitization and optimization of information flows and provides a scalable digital foundation for business growth.

Once connected to OpenText Trading Grid, organizations can select the right capabilities to meet their current requirements while retaining the option of adding capabilities and scaling up the data volumes in the future without needing to migrate to a new platform. This tiered approach, along with powerful self-service features, such as pre-packaged partner kits and connectors for NetSuite and other ERP systems, allows optimal cost structure while future-proofing the solution for business expansion, M&A activities or other major changes in solution scope and scale.



* 24x5 proactive and 24x7 reactive support services are available as options if required

OpenText provides a cloud-first integration environment that scales to meet the specific requirements and size of each business.