



NUCLEUS
RESEARCH

ERP TECHNOLOGY VALUE MATRIX 2019

ANALYSTS

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THE BOTTOM LINE

Enterprise resource planning (ERP) software is the backbone of many organizations and continues to be a market to which vendors are bringing technologies designed to automate processes and increase efficiency. In many of the industry verticals addressed by the vendors featured in this Value Matrix, customers are still struggling with digitization of data, coordinating and streamlining of processes, and moving away from heavily customized legacy systems. While vendors are promising to deliver value on technologies like artificial intelligence (AI), machine learning (ML), and Internet of Things (IoT), the use cases are still narrow in breadth and often have yet to demonstrate significant returns.



MARKET OVERVIEW

Enterprise resource planning (ERP) software is an indispensable part of the enterprise software ecosystem, providing a central system of record and a conduit between finance, planning, marketing, customer relationship management (CRM), operations, supply chain management (SCM), and human capital management (HCM). The software has continued its

push to the cloud since last year's Value Matrix, however, some vendors are finding greater success than others, especially those that are natively built for the cloud and delivered as software-as-a-service (SaaS). Many of those cloud-only vendors have had customers live on their software for 10 years or more, which results in more than enough data to demonstrate the benefits and flexibility available through the cloud. Over the past year, vendors have started to scratch the surface of what services they can deliver exclusively through the cloud; however, the ability of customers to consume these services and realize value from them is still relatively low.

In this Technology Value Matrix, Nucleus assesses the ERP market based on the value customers realize from the product usability and functionality that vendors are delivering with their solutions (Nucleus Research *S142 – Understanding the Value Matrix*, September 2018). The Matrix is a snapshot of the market designed to help customers and prospects understand where vendors are differentiating in how they deliver value and where vendors are making significant product investments.

With a broad look at the ERP market, this report focuses on how vendors are delivering functionality to more verticals as they are expanding the market segments they look to address. Additionally, through our analysis of the value customers realize from their ERP applications, Nucleus evaluates the functional depth that vendors are bringing to the verticals they currently serve. Many customers are looking to rely on a single vendor to answer all of their ERP needs without requiring additional capabilities from third-party point solutions to fill functional gaps.

The current cloud ecosystem continues to underscore the importance of the extended partner network vendors are cultivating. Often the difference between a failed or successful implementation, partners can play a critical role in the customer's ability to realize a positive return on investment. Many vendors are doing more to equip their value-added resellers (VARs) and partnered independent software vendors (ISVs) to deliver in-depth industry specific functionality as well as frontline support to customers. In the paradigm where customers aim to get 80 percent of their functional capabilities out of the box, the remaining 20 percent of configuration often falls to the partner, in addition to any extensions required in the future.

Usability continues to revolve around the greater mobility, flexibility, and user adoption. Cloud deployments facilitate more use of smartphone and tablets, be it in the back office or on the production floor, thereby requiring interfaces that adjust to smaller screens and deliver information in compact, digestible formats. User adoption is frequently the responsibility of the customer more so than the software vendor; however, vendors are still tasked with shifting to modern user interfaces (UIs) that cater more to the emerging digital native segment of the workforce.

Looking ahead, many vendors are bringing more advanced capabilities to their software platforms regardless of customers' ability to consume them. While Internet of Things (IoT) and natural language process (NLP) have become low hanging fruit, vendors are investing heavily in proving use cases for machine learning—primarily in the form of pattern recognition across large datasets—and in artificial intelligence; however, those technologies remain either very narrow in their application or continue to reside on the roadmap. Many vendors are bringing bot assistant technologies to their software that respond to both written and verbal queries, integrating with media like Skype, Slack, or Amazon Alexa. Though it remains to be seen how much value the ability to speak and chat with ERP software will bring to users, vendors see bot technology as a step towards greater automation of menial tasks.

At the start of 2019, Nucleus predicted that this year would be a turning point for many vendors who have made large promises to their customers but have, thus far, failed to deliver (Nucleus Research, *S161 – Nucleus Top Ten Predictions for 2019*, December 2018). This Value Matrix captures some of the outcome of the customer frustration that led to the prediction: leading vendors are doing a better job of delivering on their promised product innovations, while other vendors are struggling to keep pace with the market, resulting in unsatisfied customers. Despite the high switching costs associated with ERP systems, in building this Matrix Nucleus spoke with a large number of customers that had replaced their prior cloud ERP vendor with a new one because they were tired of years of promises being made and then broken. Not only were customers dealing with trust issues, but more importantly, they had failed to achieve positive value from their ERP software, with it serving as a drag on their operations and growth rather than a boon. Nucleus expects that stories of customers reaching their breaking points and moving to new vendors will increase as some vendors continue to fall short of their targets and fail to deliver the value they promise to their customers.

LEADERS

Leaders in the ERP Technology Value Matrix include Acumatica, Deltek, Infor CloudSuite, Microsoft Dynamics 365 for Finance and Operations, Oracle ERP Cloud, Oracle NetSuite, and SYSPRO.

ACUMATICA

Acumatica continues as a Leader in the 2019 edition of the ERP Value Matrix, setting the standard for usability in the market. The vendor serves several industry verticals and has been adding to its portfolio of Editions to include commerce, manufacturing, field service,

construction, and distribution. The vendor is cloud-native and delivers its products using a SaaS model. Sold entirely through its community of VARs, Acumatica allows customers to have unlimited user seats, following a consumption-based pricing system. As a result, customers have greater flexibility to use the applications as they need across all their departments rather than remain siloed. The vendor continues to experience rapid growth to its VAR, ISV, and original equipment manufacturer (OEM) partner ecosystems, due in part to the open architecture of the Acumatica Cloud xRP Platform (Nucleus Research *R11 – Acumatica Cloud xRP Platform delivers value*, January 2017).

Since the last Value Matrix, Acumatica has released a couple of product updates which have continued to focus on improving usability and cross-functional workflows (Nucleus Research *S152 – Acumatica remains pragmatic with R2 Release*, October 2018; Nucleus Research *T20 – Acumatica shows no signs of slowing*, February 2019). Acumatica is aggressively expanding the capabilities of its construction edition to include more project account and industry-specific views. As a historically under-served market segment left to languish on legacy technology, Acumatica is aiming to capitalize on its first-mover advantage into the small and medium-sized construction company.

Customers point to the flexibility and usability of the product as a central value-driver, likening the software to a box of Legos that can be configured to meet workflow needs of nearly any organization. Additionally, Acumatica has focused on investing in advanced capabilities that will be available through its platform as it becomes a greater source of differentiation. The vendor is embedding technologies like NLP and ML into its platform and allowing its ISV partner ecosystem to consume them. As it continues to aggressively expand its install-base, Acumatica is focused on ensuring that any technologies it deploys can deliver value to customers out of the box. Nucleus expects Acumatica to continue to lead the way in market usability.

DELTEK

Deltek continues as a Leader in this year's ERP Value Matrix as it continues to solidify its position in project-centric businesses. The vendor seeks to manage the entire project lifecycle for its customers regardless of industry, from won opportunity to project delivery and invoicing. Deltek covers industry verticals within government contracting including aerospace and defense, consulting, and non-profits; professional services including architecture and engineering, marketing and PR agencies, accounting, legal firms, and consulting; and commercial project businesses in the oil and gas, research, and energy verticals.

Deltek has been expanding its capabilities in the verticals it serves. For example, in January 2019, the vendor purchased Avirtu, which supplies construction specification software to architecture and engineering firms, contractors, and building material companies. Deltek

has also continued to expand on its professional services product called Vantagepoint (Nucleus Research *S188 – Deltek reinforces focus at Insight 2018*, December 2018). The latest update to the software included more localizations, improvements to its integration with Project Information Management (PIM) and QuickBooks Online, and more dashboards to help customers visualize their data. With innovations like NLP and better data visualizations, Deltek is bringing innovation to its products including greater capabilities around mobility, social integrations, analytics and data discovery, and cloud security and industry compliance standards. As the vendor brings more advanced capabilities to its suite of solutions, Nucleus expects Deltek to deliver value that outpaces what other players in the professional service and project-centric software market provide.

INFOR CLOUDSUITE

Infor is a Leader in the 2019 ERP Technology Value Matrix, having continued to bring additional capabilities to its cloud offerings. Under the CloudSuite umbrella, Infor's solutions have a vertical focus, addressing a myriad of industry-specific requirements. The vendor has built cloud-native capabilities for aerospace and defense, automotive, fashion, distribution, equipment, healthcare, food and beverage, industrial machinery, public sector, and manufacturing. To meet its customer on their terms, Infor offers flexible deployment options and has committed to supporting legacy deployments rather than forcing customers to move to the latest version.

Since the last Value Matrix, Infor has made several strategic moves to expand its reach into specific industry verticals, as well as increase its global partner network. In September 2018, the vendor acquired hospitality solutions provider, Vivonet, which offers functionality to cover operations and customer-facing processes (Nucleus Research *S146 – Infor buys into hospitality vertical*, September 2018). Later in 2018, Infor purchased Alfa-Beta Solutions, which is a system integrator operating in Europe and specializing in food and beverage companies. At the start of 2019, Infor announced additional expansions to its partner network, with specific attention on increasing the channel in Western Europe. The vendor has continued to integrate Birst and Infor Coleman as customers start to find use cases to leverage the advanced analytics and AI capabilities delivered by Infor's platform. With an initial public offering on the horizon, Infor needs to demonstrate sufficient value to its legacy customers to justify the move to the new CloudSuite solutions and ensure it maintains its competitive position in the market.

MICROSOFT DYNAMICS 365 FOR FINANCE AND OPERATIONS

Microsoft is a Leader in the 2019 ERP Technology Value Matrix. With Dynamics 365 for Finance and Operations as its enterprise offering, Microsoft focuses on the roles within an organization regardless of industry, delivering the capabilities users need to address

financial performance, manufacturing processes and procedures, business logistics and supply chain, and regulatory compliance, all while looking to facilitate intelligent investment in innovation by customers. In addition to finance and operations, Microsoft Dynamics 365 has applications that service enterprises from end to end, including retail, talent, field service, marketing, sales, project service automation, and customer service.

Last year Microsoft introduced its One Version program which is designed to ease the upgrade process with each bi-annual product release. The program has been successful in keeping over 80 percent of cloud customers running on recent releases of the applications, but still giving customers flexibility on adopting new capabilities. Additionally, having already announced the product improvements for its Fall 2019 release, Microsoft is bringing a host of supply chain management capabilities to Dynamics 365 for Finance and Operations, such as warehouse management, transportation management, and supply chain planning. The vendor is also embedding Power BI reports in application workspaces which includes the platform's new AI capabilities that are an extension of Power BI's natural language processing. Power BI Embedded is a service that gives ISVs and developers the ability to insert Power BI data analysis into applications, representing just a fraction of what Microsoft is investing in bringing AI and ML capabilities to its technology stack. As Microsoft pushes forward with its application suite on top of its platform and cloud services, it will continue to be a leading player in the market.

ORACLE ERP CLOUD

Oracle is a Leader in the 2019 edition of the ERP Technology Value Matrix, focusing on its flagship ERP product: Oracle ERP Cloud. Covering a wide range of industries, Oracle has found success moving enterprise customers to cloud in financial services, professional services, high technology, media and hospitality, education, healthcare, retail, public sector, communications, transportation, manufacturing, and consumer goods. The breadth of Oracle's functionality allows companies from nearly any industry to run their operations from end-to-end, covering workflows across ERP, enterprise performance management, supply chain management, logistics, and CRM. Oracle has continued to invest in its cloud functionality to answer more industry-specific requirements, seeking to match the functional depth that enterprises have achieved in their on-premises environments.

As part of its push to the cloud, Oracle has developed Oracle Soar, a program to help customers make the move. Designed to automate several upgrade steps, Oracle Soar looks to reduce the time and cost associated with the transition to the cloud, with a 20-week go-live target. The vendor has also continued its aggressive investment in AI and ML, looking to add intelligence to its applications, with capabilities such as digital assistants, automated processes, and data analytics through Oracle's acquisition of DataFox (Nucleus Research S167 – Oracle acquires DataFox, October 2018). Oracle is winning deals across all the

verticals it serves, which is a testament to the investment in industry-specific capabilities that it has made. As more customer mature on their cloud deployments and demonstrate the depth of functionality to which they are accustomed in their on-premises environments, Nucleus expects Oracle's ability to demonstrate value to outpace many other vendors in the ERP market.

ORACLE NETSUITE

Oracle NetSuite is a Leader in the 2019 edition of the ERP Technology Value Matrix. NetSuite focuses on small and medium-sized companies especially those with large growth aspirations and well-positioned to scale. NetSuite has continued to operate as a global business unit (GBU) of Oracle, leveraging Oracle's international presence to establish a larger global footprint, with support for over 190 currencies, 27 languages, and customer deployments in over 200 countries and dependent territories. The vendor has several enablers to help its global expansion, including multi-currency expense capture; multi-company, multi-subsidiary, multi-language, and multi-tax capabilities; intercompany trade automation; and SuiteTax API, which allows partners to integrate with tax software to handle heterogeneous requirements.

NetSuite has continued to invest in SuiteSuccess, which packages a set of industry-specific practices which are designed to provide faster time to value, increased business efficiency, and flexibility. With the goal of starting to realize benefits within 45 days, NetSuite added a planning and budgeting solution to the suite, helping companies perform cross-department planning, modeling, reporting, and workflows. Backed by the investment from Oracle, NetSuite looks to continue its land-and-expand strategy. Since the acquisition, NetSuite and Oracle have had the opportunity to closely coordinate and deliver a two-tiered ERP offering to the market, however, to date, this has only been an implicit strategy. Based on its own merits, Nucleus expects NetSuite to continue to win new logos in the midmarket and support hypergrowth companies looking to scale their operations.

SYSPRO

SYSPRO is a Leader in the 2019 Value Matrix. The vendor focuses on manufacturing and distribution functionalities and serves various industries including automotive parts and accessories, electronics, fabricated metals, food and beverage, industrial machinery and equipment, packaging, and plastics and rubber. SYSPRO provides service and support to over 15,000 customers across 62 countries and handles both SMBs and tier-one enterprises. Customers have a choice of deploying on-premises or in the cloud either through subscriptions or perpetual licenses.

SYSPRO's partnership with Microsoft enables its customers to take advantage of various Azure capabilities, ranging from the IoT hub to Azure AI/ML bot technology. SYSPRO's ERP bot comes with 60 skills available out of the box and can be deployed to any messaging platform. SYSPRO also offers a range of user interfaces, including its mobile application, Espresso; the web-based Avanti; and Harmony, which displays key ERP data and metrics in the style of a social media feed.

SYSPRO's focus on practical applications of modern ERP technology illustrates its sustained commitment to delivering value to its existing customers, while its industry innovations make it a competitive choice for customers in need of a new ERP solution. Nucleus expects SYSPRO to continue investing in the scalability of its solution which will help maintain its position as a Leader in the Value Matrix.

EXPERTS

Experts in the ERP Technology Value Matrix 2019 include IFS, Plex, QAD, Rootstock, and SAP S/4HANA.

IFS

IFS is an Expert in the 2019 ERP Technology Value Matrix with capabilities focused on specific industries including aerospace and defense, energy, utilities and resources, engineering, construction and infrastructure, manufacturing, and services. The vendor provides a platform of enterprise management applications that cover functionalities for manufacturing, engineering, planning, project management, logistics and fulfillment, maintenance, HCM, quality management and financials. IFS also offers a choice for how its customers deploy IFS Applications 10, with both on-premises and cloud implementations available.

IFS Applications 10 was launched in May 2018 and included a new user experience based on HTML5 so that it is now capable of running on any device and operating system. The latest version of the applications included over 500 functional updates across all the industrial verticals the vendor services. These capabilities included discrete and process manufacturing, supply chain, warehousing, service, asset management, project management, human resources, and finance, as well as technology innovations covering AI, IoT, and mobility.

In January 2019, IFS released an update to Field Service Management 6, with enhanced capabilities for reverse logistics, spare parts management and depot repair, and increased flexibility for workforce scheduling. Also part of the release was a modernized user interface

and new customer engagement features that extend the solution's self-service capabilities. In February 2019, IFS and PTC (a product lifecycle management vendor) announced a strategic partnership that would lead to the integration of PTC's Servigistics Service Parts Maintenance solution with IFS Field Service Management, IFS Applications, and IFS Maintenix. The new offerings will enable customers to improve equipment uptime and service part availability in their manufacturing environments.

IFS has an aggressive growth strategy that calls for expanding its base of cloud deployments, both as transitions from on-premises implementations and as net-new customers. Nucleus expects to see further functionality investments and better value for customers in the verticals that IFS covers.

PLEX

Plex is an Expert in the 2019 ERP Value Matrix. The vendor delivers cloud ERP for a variety of specialized industries including industrial manufacturing, automotive, aerospace, high tech, electronics, food and beverage, and metal forming. The Plex Manufacturing Cloud handles business process management with financials and accounting, enterprise management, CRM, HCM, procurement, and supply chain planning. Plex also serves manufacturing customers with functionalities for planning and scheduling, and management for inventory, quality, production, and engineering programs.

Since the 2018 Value Matrix, Plex has continued to invest in developing its functionality among a crowded marketplace. Plex's Fall 2018 release brought updates for its IntelliPlex analytics technology, Plex Mobile, APIS for business management transactions, and a multi-entity truck-shipping module. The Winter 2019 product release in January brought enhancements for Plex's connectivity and security capabilities as well as developments for IntelliPlex, the solution's purchase order capability, and its supply chain integration. Nucleus sees Plex demonstrating that it is equipped to provide modern ERP capabilities to its midmarket customers and that it is committed to providing value in 2019 and beyond.

QAD

QAD is an Expert in the 2019 edition of the ERP Value Matrix. The vendor provides manufacturing cloud ERP functionalities through its Adaptive UX and the QAD Enterprise Platform for six industry verticals: automotive, consumer products, food and beverage, high tech, industrial, and life sciences. QAD focuses on streamlining the management of various business processes for its customers such as manufacturing operations, supply chain management, CRM, and financials. The vendor encourages customers to transition to the cloud by delivering modern capabilities including data lake, machine learning, IoT, and other Industry 4.0 technologies via QAD Labs.

In new versions made available in October 2018 and April 2019, QAD enhanced QAD Cloud ERP. In October, QAD added a new Operations Action Center and a Maintenance Action Center for improved real-time operations visibility via embedded analytics and relevant KPIs. It also made functional improvements across its cloud portfolio as well as various performance enhancements to its existing cloud products including Customer Management, Service Management, Asset Management, Production Orders, and Financials. The vendor also announced an extension to the Channel Islands UX in April 2019, enabling its users to personalize their deployments with little to no coding. At its user conference, Explore, in May 2019, the vendor rebranded its flagship solution as QAD Adaptive ERP and its application portfolio as QAD Adaptive Applications, highlighting the flexible and scalable nature of the software. QAD's customizability and recent investments in user experience demonstrate its focus on delivering value to customers and will help maintain its position on the Value Matrix.

ROOTSTOCK

Rootstock is an Expert in the 2019 ERP Value Matrix, delivering cloud distribution and manufacturing functionalities on the Salesforce platform. Rootstock serves customers in various industries, including project manufacturing, wholesale distribution, industrial equipment, high tech, electronics, machinery, industrial, and engineer-to-order. The solution's friendly user experience and deep integration with Einstein Analytics make it an attractive choice for customers familiar with Salesforce technology.

Since the last Value Matrix, Rootstock has invested in facilitating transitions from on-premises deployments and data transfers between cloud systems. In September 2018, the vendor released the CPQ Manufacturing Connector for Salesforce CPQ. The application will streamline the process from configuration, pricing, and quoting (CPQ) to production, packing, shipping and billing. In March 2019, the vendor launched the Rootstock Data Framework, a collection of prebuilt ERP data objects that enables organizations to efficiently transfer and map legacy ERP data to the Salesforce platform. Rootstock's customer-centric approach to manufacturing and distributing ERP will continue to differentiate it from other vendors and maintain its future position in the Value Matrix.

SAP S/4HANA

SAP is an Expert in the 2019 edition of the ERP Value Matrix. The vendor has continued to focus on its S/4HANA products, both on-premises and cloud, delivering quarterly updates to SAP S/4HANA Cloud and yearly updates to SAP S/4HANA. SAP applications cover a large breadth of industries and functional areas including finance, professional services, manufacturing, services, procurement, supply chain, commerce, asset management, sales,

and human resources. The vendor has three key components to its intelligent enterprise framework: Intelligent Technologies, Digital Platform, and Intelligent Suite.

SAP is focusing on bringing more intelligent capabilities to its ERP software, which it continued with its 1905 release made available in May 2019. In the latest release, SAP focused on giving users tools such as digital assistants, machine learning, and predictive analytics to help with automation and integration of business processes. For example, in manufacturing through the Record Defect application, with each entry of a defect by an operator, the system improves its predictive capabilities in assigning the right code to the issue and proposing the correct remediation.

While SAP is expanding the universe of use cases, customer adoption is still slow in most organizations, with many struggling with digital change management. As SAP looks to help customers transition to its cloud applications, the vendor has refreshed several features of its SAP Activate Implementation Portal, including updated methodology guidance, organizational change management, and business-driven configuration. The vendor has also enhanced its regression test automation and role-based testing to help organizations as they prepare to move their environments. As SAP brings more compelling technology-use cases to its ERP products, Nucleus expects customers to derive greater value from the intelligent capabilities moving forward.

FACILITATORS

Facilitators in the 2019 edition of the ERP Technology Value Matrix include FinancialForce, Microsoft Dynamics 365 Business Central, SAP Business ByDesign, SAP Business One, and Unit4.

FINANCIALFORCE

FinancialForce is a Facilitator in the 2019 ERP Value Matrix, providing a customer-centric ERP constructed on the Salesforce platform. The vendor specializes in financial management, professional service automation (PSA), and people management in its customer-centric core product offerings. FinancialForce's native integration with Salesforce is one of its primary differentiators, as it combines ERP functionalities with Salesforce's familiar user experience. FinancialForce also incorporates Salesforce's Einstein Analytics technology into its solution.

The vendor released its Fall 2018 update in November and introduced deeper out-of-the-box integrations between Einstein and its Financial Management and PSA Analytics solutions, along with the launch of the FinancialForce Integration Hub; and updates to its

billing and collections functionalities. In May 2019, FinancialForce announced the release of Accelerate, a suite of services designed to promote value across its customers' deployment lifecycles, from solution evaluation to the adoption of best practices.

While the vendor's close relationship with Salesforce has advanced its vision for customer-centric company visibility, FinancialForce's ERP functionalities are still narrowly concentrated compared to the rest of the market. Expanding to include capabilities that target specific industries and their needs would contribute to an improved functionality score for FinancialForce in the near future.

MICROSOFT DYNAMICS 365 BUSINESS CENTRAL

Microsoft Dynamics 365 Business Central is a Facilitator in the 2019 edition of the ERP Value Matrix. As Microsoft's SMB offering, Business Central is built on the NAV platform for both cloud and on-premises deployments. For customers operating on-premises, Microsoft has made the shift to cloud as simple as possible; however, customers that wish to remain on-premises on NAV can continue to do so. Additionally, those customers on Dynamics SL and Dynamics GP deployments can continue to use the products and leverage the future roadmaps that both platforms have. To test out what the cloud would be like, Microsoft allows customers to continue to run their operations on premises while their key data are synced with the cloud, giving users a preview of what they can expect from cloud applications. That data sync feature can later be used as a cloud migration tool to facilitate a smooth transition once a GP or SL customer is ready to move fully to the cloud.

Dynamics 365 Business Central is sold exclusively through third-party VARs. Many of the VARs are also ISVs who can host their solutions and extensions on Appsource, giving customers access to functionality to help them run their business from end-to-end across a wide variety of industry verticals. With the foundational technology that is typically reserved for enterprise customers only, Business Central equips SMB customers to stay compliant with regulations as their operations scale, as well as take advantage of the deep embedding and integration with Microsoft Office 365. In the October 2019 release Microsoft is updating Business Central to purely browser-based or mobile operating system interfaces, eliminating the Windows client moving forward. While the legacy client remains supported with the April 2019 update, the shift demonstrates how Microsoft is starting to widen the gap between newer versions of its software and older deployments. As Microsoft continues to make it easier for developers and its ISV partner community, Nucleus expects customers to be able to better leverage the advance capabilities that the vendor's infrastructure and platform deliver.

SAP BUSINESS BYDESIGN

SAP Business ByDesign is a Facilitator in this year's ERP Value Matrix. Designed to address mid-sized companies from end-to-end with cloud-native software, ByDesign covers nearly every part of the organization including finance, CRM, HCM, project management, procurement, supply chain management, as well as numerous industry-specific capabilities to address customers in wholesale distribution, professional services, manufacturing, and the public sector. ByDesign has global reach with SAP delivering 20 country-versions and 19 additional partial localizations, while partners support 72 country-versions. However, the software has been deployed in over 140 countries, which means customers have deployed the software in non-localized countries, making the continued tailoring of the solution to new markets a priority for SAP moving forward. In the latest update of the solution, 1902 release, SAP added Israel to the list of SAP-delivered countries, with South Korea planned for release 1908. Release 1902 also included several enhancements to ByDesign's built-in analytics capabilities such as options for analysis in charts and tables, and monitoring of KPI variants. As SAP continues to invest in ByDesign to help customers that want to expand their global footprints, Nucleus expects the solution's value proposition to track with movements in the ERP market overall.

SAP BUSINESS ONE

SAP Business One is a Facilitator in the 2019 Value Matrix. The solution is tailored for small businesses and has functionalities for CRM, finance, production management, warehousing, purchasing, procurement, reporting, and analytics. The vendor offers customers a range of deployment options (including on-premises, hybrid, and cloud-only) and can tailor implementations to each organization's needs. SAP Business One serves more than 60,000 customers around the world across multiple verticals including healthcare, financial services, manufacturing, higher education, agriculture, and professional services.

SAP Business One's most recent version (9.3) delivered various enhancements to the user interface and new workflow functionalities. Users can import new data types into Microsoft Excel from Business One, while the CRM and Financial Management capabilities were both updated with simplified interfaces and new operating standards. Nucleus expects to see more investment in SAP Business One's functionality which will improve its future position on the Value Matrix.

UNIT4

Unit4 is a Facilitator in the 2019 Value Matrix. The vendor provides a flexible ERP platform that specializes in functionalities for nonprofits, professional services, higher education, and public services. Its flagship solution, Unit4 Business World, delivers many core capabilities

including management for finances, projects, and procurement; human resources and payroll functionalities; and field service and asset administration.

Unit4's "people-oriented" strategy focuses on equipping its customers to leverage new cloud-enabled technologies. The People Platform Extensions Kit enables Unit4 users to build low-code and no-code microservice applications that can be run alongside Business World implementations and publicly shared on the Unit4 Application Marketplace. Unit4 has further invested in developing its digital assistant, Wanda, which can automate repetitive tasks and operates in multiple languages including French, German, Dutch, and English.

Unit4 offers a variety of deployment options but has invested in transitioning its customer base to the cloud. In May 2019, the vendor announced a fixed price plan for cloud migrations that includes a free assessment of the individual customer's needs for transitioning their current deployment. Also in May, Unit4 announced its acquisition of Intuo and its intention to incorporate the human resources (HR) vendor's suite of "talent enablement" applications into the Business World HR solution. Unit4 also launched its first two smart automation services, Smart Resource Planning and Smart Invoice Processing, as part of its development towards a self-driving ERP. Nucleus expects that Unit4's investment into usability and smart capabilities will differentiate it from other vendors, notably for customers in its specialized verticals.

CORE PROVIDERS

Core Providers in the 2019 edition of the ERP Technology Value Matrix are Aptean, Epicor, IQMS, Sage, and VAI.

APTEAN

Aptean is a Core Provider in the 2019 Value Matrix, delivering specialized functionalities for distribution, logistics, and manufacturing. The vendor's vertical solutions cover a wide range of industries including discrete manufacturing, medical device manufacturing, process manufacturing, food and beverage, chemical, pharmaceuticals, retail, automotive, metals, electronics, retail, and wholesale distribution. Aptean rounds out its product offerings with capabilities for enterprise asset management (EAM), manufacturing execution systems (MES), and warehouse management systems (WMS).

Aptean has been active since the last Value Matrix, releasing various product updates in October and December 2018, and April 2019. The updates include functionality improvements for Aptean's Ross and DTR ERP products that expand the reporting and collaboration capabilities of both solutions and added controls for administrators. Aptean

also underwent corporate changes: in October 2018, it sold 14 different applications that cover functionalities, ranging from SCM to CRM, to ESW Capital. The spinoff has enabled Aptean to concentrate on expanding its international reach. In May 2019, the vendor acquired Danish ERP vendor OPTIWARE to deepen its platform capabilities and improve its access to the European market. Aptean's renewed focus on its core ERP offerings will continue to deliver value to its customers as competition increases across the board.

EPICOR

Epicor is a Core Provider in the 2019 ERP Value Matrix. The vendor offers customers a choice of deployment options from on-premises to public or private cloud and provides ERP functionalities tailored to specific industries including automotive, distribution, lumber, manufacturing, and retail. Epicor leverages Microsoft Azure to deploy its cloud ERP offerings and has recently been investing in the implementation of modern capabilities such as the IoT, AI, and machine learning.

Epicor has remained active since the 2018 ERP Value Matrix. In October 2018, the vendor introduced the Epicor Dealer Network, an online process consolidation tool, and the user interface Epicor Kinetic Framework to Epicor ERP. Epicor's distribution solutions, Prophet 21 and Eclipse, also received various updates including a new search functionality, wireless warehouse management systems for Prophet 21, and improved data integration and job management capabilities for Eclipse. Finally, in April 2019, Epicor announced the release of updates to its midmarket ERP solution iScala and the launch of its AI-based Virtual Agent. iScala received enhanced reporting and analytics capabilities, a refreshed user interface, and a deeper integration to Epicor's Data Analytics solution. The Epicor Virtual Agent (EVA) represents the vendor's foray into simplifying user interactions with ERP software and was developed with AI services from Microsoft Azure. Customers can access EVA from any device, use it to carry out various tasks, and recommend actions within set parameters.

Epicor's deep functionality investments in specific verticals demonstrate its commitment to delivering value to customers in its target markets, but it must execute on its cloud strategy in order to maintain pace with the market. Nucleus expects Epicor to improve its position on the Value Matrix as it continues to invest in developing its user interface and moving its legacy functionalities to the cloud.

IQMS

IQMS is once again a Core Provider in the 2019 Value Matrix, providing ERP, WMS, and MES to industries including automotive, aerospace, defense, medical, plastics, and packaging. The vendor focuses on unifying information sources through a single database and offers customers a choice of deployments including on-premises, hosted perpetual

licenses, and SaaS. IQMS enables customers to modernize their shop floor operations with Industry 4.0 capabilities such as automation, maintenance, repair and operations (MRO) tracking, and overall equipment effectiveness (OEE) management. IQMS also provides standard integration interfaces with numerous major software vendors including Oracle, SAP, Salesforce, and Marketo.

In December 2018, IQMS was acquired by Dassault Systèmes, a French company specializing in computer-aided design (CAD) and product lifecycle management (PLM) software. Dassault plans on integrating IQMS's offerings into its 3DEXPERIENCE solution to deliver PLM, ERP, MES, and Quality Management Systems (QMS) from a single consolidated platform. Nucleus expects Dassault to rebrand the solution in the coming months but sees the acquisition as an opportunity for IQMS to deliver its value message to an expanded global audience and maintain its position in future editions of the value Matrix.

SAGE

Sage is once again a Core Provider in the ERP Value Matrix. The vendor covers businesses of all sizes through Sage Business Cloud and delivers industry-specific functionalities in manufacturing for high-tech, industrial equipment, metal fabrication, and medical devices; process manufacturing for chemicals, cosmetics, food and beverage, and pharmaceuticals; distribution for wholesale, logistics, and retail; and services for advertising, engineering, IT and software. Sage Business Cloud is building up an extensive application marketplace through its VAR and ISV partners, and aims to be a comprehensive platform across two categories: accounting and financial, and people and payroll—with Enterprise Management designed for medium-size product centric businesses or those with more complex needs.

Sage has heavily invested in its construction solution, announcing product updates in December 2018, and April and May 2019. The updates include the release of a mobile application and reporting capabilities for improved organizational visibility, integrations between the solution and external applications, and streamlined banking processes. In April 2019, the vendor announced the release of Sage Business Cloud Enterprise Management V12, featuring an updated user interface, extensive integrations with third party applications, and customizable workflows, as well as expanded choice of deployment options across cloud, hybrid or on-premises. Sage's most immediate concern is transitioning its existing customer base away from on-premise deployments, as cloud-enabled ERP benefits now significantly outweigh the upfront cost of upgrading.

VAI

VAI (Vormittag Associates, Inc.) is a Core Provider in the 2019 ERP Value Matrix. The vendor's flagship product, S2K Enterprise, delivers functionalities to specialized industries including apparel, automotive, building and electrical supply, medical products, electronics, food and beverage, and plastics. VAI also provides industry-focused solutions for manufacturing and distribution customers and a collection of vertical-specific applications for CRM, warehouse management, and business intelligence. S2K Enterprise also handles management capabilities for finances, manufacturing, distribution, and retail. VAI is positioned to serve high-growth midmarket companies and can efficiently handle mergers and acquisitions for its customers.

In October 2018, the vendor announced the expansion of its data center infrastructure, to increase the capacity of its cloud capabilities. In November, VAI launched the S2K Marketing Cloud, delivering automated marketing and targeted sales capabilities to its customers within the S2K suite. Finally, VAI launched a mobile version of its Sales Information application in February 2019, providing its users with remote access to sales history and analytics from the S2K mobile platform.