ERP TECHNOLOGY VALUE MATRIX 2016

NUCLEUS RESEARCH

ANALYST

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THE BOTTOM LINE

The enterprise resource planning (ERP) market continues to shift rapidly as the adoption of cloud-based systems increases and vendors add capabilities to an already competitive landscape. Nucleus's 2016 ERP Value Matrix reflects the shift to cloud as vendors are making large investments in their cloud offerings, with mobile functionality, internet of things (IoT), and embedded analytics as the table stakes. Extended capabilities and features such as process automation and machine learning represent the cutting edge of what vendors are bringing to market.

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MARKET OVERVIEW

In 2016, the enterprise resource planning (ERP) market experienced some large transitions as vendors sought to consolidate their market position and expand the capabilities they deliver to customers. The list of market-shaking events is long and includes Oracle buying NetSuite, KKR's acquiring Epicor, Koch Industries leveraging its investment arm to pour money into Infor, and Roper Technology buying Deltek, to name just a few. The moves indicate that the ERP market is on a strong growth path with many companies reaching the end-of-life on their current solutions and in need of a technology refresh.

The massive push to the cloud and the rate of innovation is ushering in a new paradigm for the industry. These are not halcyon days, but rather are punctuated by disruption, which requires new software and service delivery models. Customers purchasing ERP understand that it is often no longer a static, licensed product, which for vendors means that if they are standing still, then they are falling behind.

To keep pace, vendors need to deliver capabilities that help their customers compete in a world where speed, scalability, flexibility, and information are paramount. Native mobile applications, web-based user interfaces, configurable dashboards and landing pages are standard in the modern ERP product landscape. Additionally, Internet of Things (IoT) capabilities and advanced analytics that are integrated seamlessly into the product environment to provide insights and visibility are becoming ubiquitous. More vendors are offering open representational state transfer application programming interfaces (REST APIs), letting their partners and customers develop the business-critical extensions that help deliver value. Capabilities delivering machine learning algorithms that lead to process automation and catch human errors represent the leading edge for ERP technology. Vendors are ahead of the market if they have developed these technologies beyond beta testing and have customers leveraging them today.

The proliferation of software-as-a-service (SaaS) has had a drastic effect on product usability facilitating easier deployments, easier upgrades, less technology management, greater mobility, new user experiences, and better value (Nucleus Research, *Q65 – Cloud delivers 2.1 times more ROI*, April 2016; Nucleus Research, *Q102 – Cloud ERP get 43 percent faster payback*, June 2016). Nearly all vendors have invested heavily in delivering cloud solutions, so the distinctions are evaporating. The growth rates of SaaS-based revenue for many vendors show no signs of slowing. However, many customers have realized that the path to cloud is not as smooth as the marketing materials suggests, causing vendors to provide extended services that deepen the value proposition.

However, some customers with on-premise deployments consider their ERP system to be core part of their market differentiation, translating to huge value. Based on the depth of functionality customers achieve, vendors still offering highly customizable ERP still cannot be matched by even the most complete cloud offering. These vendors are delivering value to customers, but will continue to see their positions erode as the lion's share of R&D goes toward cloud deployments, building capabilities to better match the business needs of nearly any company.

In the 2016 ERP Value Matrix, vendors are positioned based on the usability of their products and the functionality they deliver to customers. Vendors are rated based on their products' horizontal and vertical capabilities, not the additional capabilities provided by their partner ecosystem. However, both implementation partners and the ready availability of complementary ERP applications are important considerations for purchasers. To this end, 2016 has seen several announcements of partnerships and acquisitions that impact the value vendors deliver to customers.

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ERP VALUE MATRIX 2016
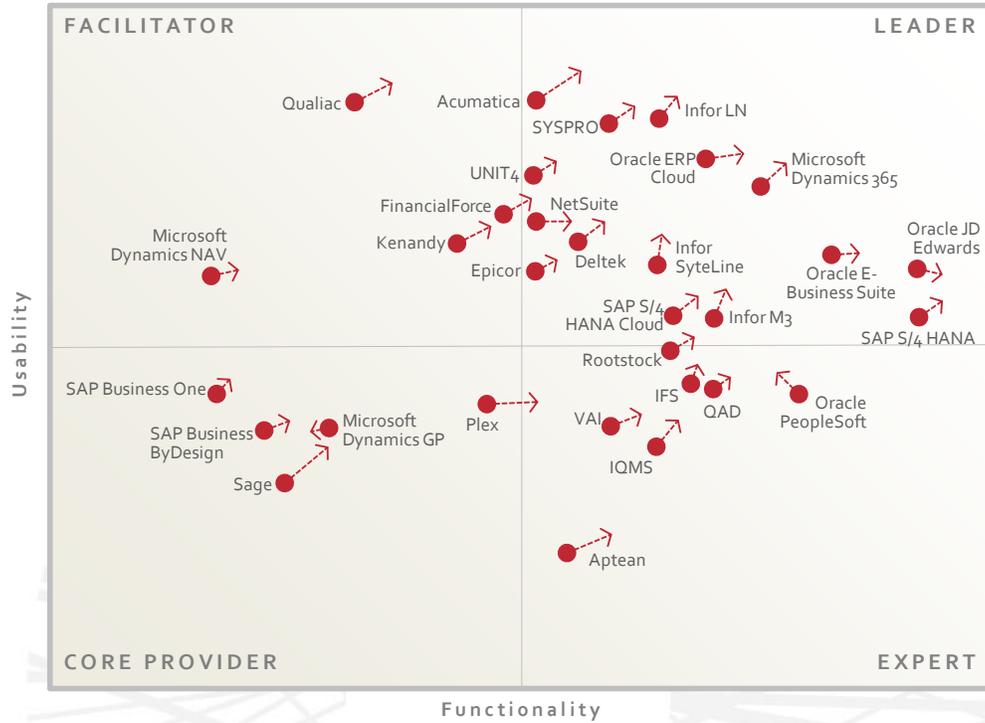
LEADERS

Leaders in the ERP Value Matrix include Acumatica, Deltek, Epicor, Infor LN, Infor M3, Infor SyteLine, Microsoft Dynamics 365 for Operations, NetSuite, Oracle ERP Cloud, Oracle E-Business Suite, Oracle JD Edwards, SAP S/4 HANA, SAP S/4 HANA Cloud, SYSPRO, and Unit4.

ACUMATICA

Acumatica delivers ERP solutions to small- and medium-sized businesses (SMBs) across several industries including services, wholesale distribution, manufacturing, retail, food and beverage, and non-profits. Notably, Acumatica is servicing larger and larger organizations, demonstrating the extensibility and flexibility of its ERP products. Sold only through its value-added reseller (VAR) channels, Acumatica made key additions to its partner ecosystem in 2016, increasing its reach into new markets and helping to accelerate the growth of its public cloud offering.

Since the last Matrix, Acumatica released version 6.0, which includes horizontal solution suites covering financial management, project accounting, distribution

management, and customer management, as well as market vertical editions for field service, manufacturing, and e-commerce (Nucleus Research, *Q174 - Acumatica Release 6*, September 2016). Version 6.0 included enhancements such as a Microsoft Outlook Add-in, business intelligence capabilities leveraging Microsoft Power BI, and Representational State Transfer API that allows programmers to manage and update components without affecting the system at large. Acumatica customers can leverage its Customer Relationship Management Suite, which includes a Microsoft Outlook integration and applications that were built into the platform rather than added as a module. Additionally, Acumatica includes a mobile framework that is user-friendly and can be used on any device with a web browser or through native to Android and Apple iOS apps.

The steps Acumatica has made to extend the functionality of its solution push it into the Leader quadrant in this year's ERP Value Matrix. Nucleus expects that Acumatica will continue to deliver value and positive return on investment similar to what it demonstrated this year (Nucleus Research, *Q148 – Acumatica ROI Case Study – Ergoresearch*, August 2016).

DELTEK

Deltek is a Leader in the 2016 ERP Value Matrix, providing ERP solutions to project-centric businesses in several sectors including government contracting, architecture, engineering, construction, consulting, and accounting. Deltek's solutions help customers along every part of the project lifecycle with capabilities such as project accounting, business development, project and portfolio management, professional services automation, and resource management. Since the last Matrix, Deltek made several moves to broaden its portfolio of products and deepen its value proposition for customers. These developments include:

- Union Square Acquisition. In July 2016, Deltek announced it had acquired Union Square, a project information and collaboration software vendor specializing in the Architecture, Engineering, and Construction (AEC) industry. Prior to the acquisition, Deltek was deeply focused on the AEC industry, which the addition of Union Square only furthers.

- New release of GovWin IQ. Designed to support government contractors, GovWin IQ features GovWin Market Alerts that helps contractors keep track of changing business conditions and events in order to better compete for new business opportunities. Deltek announced the release of GovWin IQ in August 2016.

- Deltek Resource Planning. Announced in October 2016, Deltek Resource Planning is a new solution that is part of Deltek's Costpoint Cloud suite or as a

standalone offering deployed in the cloud or on-premise that can connect to third-party ERP systems and human capital management systems. Designed to assist government contractors with project planning and management, Deltek Resource Planning adds to Deltek's solution suite that caters to project-centric organizations.

The mix of functionality across industries and scalability push Deltek into the Leader quadrant. Deltek's investments in UI/UX, along with consolidating its cloud offerings under one name, will further enhance its position in the future versions of the Value Matrix.

EPICOR

Epicor maintains its position in the Leader quadrant of the 2016 ERP Value Matrix. In March 2016, Epicor released 10.1 for on-premise customers, which moved away from the task-based design to one that is HTML5-based and responsive to improve usability. Additionally, Epicor announced its 10.1.500 version release in November 2016. Epicor has adopted a cloud-first strategy and is currently delivering capabilities such as business intelligence/analytics, e-commerce, social collaboration and mobile. On the product roadmap are capabilities such as application building tools for both partners and customers, IoT and Big Data tools, and predictive analytics. In September 2016, KKR finalized its acquisition of Epicor, which could be the launching pad Epicor needs to bring its roadmap to fruition. The investments in additional functionality should further improve Epicor's position in future editions of the Value Matrix.

INFOR LN

Infor retains its spot in the Leader quadrant of the ERP Value Matrix as it continues to invest in industry verticals including machinery and equipment, manufacturing, distribution, automotive, and aerospace and defense. In July 2016, Infor announced the release of Infor LN 10.5 — and demonstrated the outcome of the investments Infor made in usability with the new interface that was introduced earlier this year. Since the publication of the last Matrix, Infor released an enhanced version of its CloudSuite for aerospace and defense users.

Since the last Value Matrix, the company has also made strides to integrate its GT Nexus purchase, which delivers a robust end-to-end supply chain solution. Infor is squarely focused on enhancing its CloudSuite offerings, which are underpinned by a UX designed by Infor Hook and Loop, and the social collaboration platform, Infor Ming.le. Like other ERP vendors, Infor faces the challenge of moving its legacy customers to its new cloud products. Additional investments to enhance the cloud value proposition will push Infor higher in future iterations of the Value Matrix.

INFOR M3

Infor M3 is a Leader in this year's ERP Value Matrix which focuses on industry verticals deployed to the cloud or on-premise for chemicals, distribution, equipment, fashion, manufacturing, and food and beverage, with micro-verticals under each larger industry. M3 includes applications to manage customer sales and service, finance, manufacturing operations, supply chain management, and equipment management. As a Java-based solution, M3 gives customers added flexibility to choose the infrastructure, database, and operating system that best fits their needs.

Inforum 2016 attendees were given a preview of version 13.4, the next big release of Infor M3, due out this year, which includes improvements to each industry vertical. The continued investment by Infor in M3 and extending its capabilities means customers will get improved usability and functionality.

INFOR SYTELINE

Infor SyteLine continues to be a Leader in the Matrix as Infor's manufacturing and distribution offering. Infor has shifted SyteLine to be CloudSuite Industrial, but it remains a Leader due to its flexibility and extensibility. In February, Infor released version 9.00.30 which included adoption of the Infor 10x technology platform including Infor Ming.le and Infor ION. Additionally, SyteLine has been updated to the latest Hook & Loop UX and uses the Implementation Accelerator to help customers deploy quickly and start extracting value. Infor plans to release an update soon that introduces two new CloudSuites: Infor CloudSuite Business and Infor CloudSuite Industrial. As a result, StyeLine will be the foundation of Infor's strategy targeting the SMB market. With the investment by Koch Equity Development, Infor is assured capital to invest in delivering additional value to its SyteLine customers.

MICROSOFT DYNAMICS 365 FOR OPERATIONS

Microsoft continues in its Leader position in the ERP Value Matrix with the latest releases of its solutions improving both functionality and usability for customers. Considering Microsoft's current trajectory, focusing on productivity, the interoperability of its software, extending the lifecycle of its products with Lifecycle Services using the power of the Azure platform, and helping the business user become an application developer, Nucleus predicts that Microsoft will continue to strengthen its Value Matrix position (Nucleus Research, *q106 – Microsoft PowerApps empowers business users*, June 2016; Nucleus Research, *q127 – Microsoft announces Dynamics 365*, July 2016).

Microsoft Dynamics 365 for Operations is the evolution of Dynamic AX, its enterprise ERP software, which was released in March 2016 and is the sharp end of

Microsoft's cloud-first strategy. Part of the Dynamics 365 Enterprise suite, Dynamics for Operations is built native to Microsoft Azure and highlights Microsoft's ability to deliver an end-to-end cloud product suite in combination with Office 365, Power BI, and Microsoft's CRM applications - Dynamics 365 for Sales, Dynamics 365 for Service, Dynamics 365 for Field Service, and Dynamics 365 for Project Service Automation (Nucleus Research, *q53 – Microsoft Dynamics AX advances cloud ERP*, March 2016). Dynamics 365 for Operations leverages Cortana Analytics and Azure Machine Learning along with providing personalized dashboard and workspaces to help user decision making. Microsoft delivers additional functionality through its extensive partner and independent software vendor (ISV) network, which is developing industry-specific solutions on Microsoft AppSource, its new marketplace for business applications.

NETSUITE

NetSuite maintains its Leader position in the 2016 ERP Value Matrix. With its ERP solution delivering capabilities for financial management, production management, order management, supply chain, warehouse management, and procurement, NetSuite made several product enhancements throughout 2016. New products such as SuiteBilling, which connects both the billing and revenue recognition processes with controls and auditability, help businesses comply and reduce risks. Additional NetSuite OneWorld enhancements highlight faster financial close, flexible tax compliance tools, new payment options for both B2B and B2C businesses, and improved control of audit and compliance to meet local statutory requirements.

The largest development for NetSuite in 2016 was its acquisition by Oracle, which was completed in November. The acquisition leaves NetSuite's future uncertain, though it has stated that customers should expect greater service and value. Additionally, NetSuite has stressed that Oracle will help it accelerate its plans to expand its international presence, as well as allow it to leverage Oracle's resources to extend its capabilities. Although customers have expressed some trepidation about the move, it is too early to tell if NetSuite's value delivery will change.

ORACLE ERP CLOUD

This edition of the ERP Value Matrix finds Oracle ERP Cloud in the Leader quadrant. Oracle ERP Cloud includes a suite of solutions such as Oracle Financials Cloud, Oracle Revenue Management Cloud, Oracle Procurement Cloud, Oracle Risk Management Cloud, and Oracle Project Portfolio Management Cloud. In 2016, Oracle ERP Cloud continued to be the primary focus for Oracle product developments. Many of the product announcements coming out of OpenWorld 2016 were geared toward increasing the value proposition of moving to the cloud, such as enhanced security services, data management services, and migration

services (Nucleus Research, *Q182 – Oracle remains cloud-first at OpenWorld 2016*, September 2016). Oracle's cloud-first strategy extends from large, global enterprise customers down to small- and medium-sized businesses (SMBs). Oracle's acquisition of NetSuite will potentially further Oracle's reach into the ERP cloud mid-market. Oracle is sure to invest in enhancing the cloud transition value proposition. Further investment in expanding the universe of use cases should help Oracle's Value Matrix positioning in the future.

ORACLE E-BUSINESS SUITE

Oracle E-Business Suite continues as a Leader in this year's ERP Value Matrix. In September 2016, Oracle released E-Business Suite 12.2.6 which included several new capabilities that help improve the value to customers. New capabilities include order management, warehouse management, inventory management, procurement visibility and supplier management, project resource management, field service solutions, parts servicing planning and management, and financial subledgers to better manage collections and exceptions. Oracle also released improvements to the user experience with tablet interface optimization and additional HTML UIs. As a cross-cutting solution, E-Business Suite has a solution suite as diverse as its customers, which keeps it in a strong position on functionality. Investments in expanding the flexibility of the UI should further improve its usability moving forward.

ORACLE JD EDWARDS

Oracle JD Edwards continues as a Leader in the ERP Value Matrix. With the latest batch of improvements announced in November 2016 as part of the Tools 9.2 Update 1, JD Edwards remains one of the most comprehensive functional solutions on the market. Recent improvements to the UX with JD Edwards UX One, which includes 32 role-specific views on top of the ability to personalize and configure the solution to optimize use, have pushed the solution higher on the usability axis. In addition to the user enhancements, JD Edwards EnterpriseOne Search allows users to quickly retrieve information and JD Edwards EnterpriseOne Mobile Enterprise Applications enhancements include proximity search using geo-location within the Contact Customer application and barcode scanning within Sales Order or Inventory Management applications. The improvements included in Tools 9.2 Update 1 demonstrate Oracle's commitment to its JD Edwards customers, many of whom have tailored their ERP solution such that it is part of their competitive advantage and how they differentiate. In a cloud-centric market, Oracle JD Edwards continues to invest in helping their customers keep pace and leverage the latest technologies.

SAP S/4HANA

SAP's on-premise ERP offering for enterprise customers is a Leader in this year's Value Matrix based on the high level of functionality the product delivers. SAP S/4HANA's solution offerings include core finance, order-to-cash, plan-to-product, procure-to-pay, and request-to-service, helping companies manage their operations from end-to-end. The flexibility of the solution and its available integrations with other systems and SAP products, such as SuccessFactors, Fieldglass, and Financial Services Network, ensure that SAP can address the functional needs of nearly any business.

The most recent version, SAP S/4HANA 1610, was released in November 2016 and includes some key improvements that add to SAP's position in the Value Matrix. First, SAP S/4HANA uses the SAP Fiori 2.0 UX, bringing several modern UI enhancements to the solution such as personalized landing pads, search functionality, priority notifications, and tailored task overviews. Second, 1610 delivers a single source for financial data with SAP S/4HANA Finance, giving users greater visibility and improving efficiency for finance departments. Additionally, SAP Extended Warehouse Management can now run as part of S/4HANA or as a separate application, allowing S/4HANA to be the central system of record if customers choose. SAP has also added industry-specific functionality for customers in retail and oil and gas. SAP continues to invest heavily in its on-premise ERP offering, adding functionality and usability enhancements designed to help its customers.

In response to SAP customers' requests for information on what is to come in the S/4HANA application landscape, SAP is making several moves. Already available to customers, SAP has published its first 3-year product roadmaps for SAP S/4HANA and the first rolling-four-quarters roadmap for SAP S/4HANA Public Cloud. customers. SAP plans to release roadmaps for additional key products soon. Nucleus expects other initiatives that will be rolled out in 2017 will assist customers to gain additional value from their S/4HANA deployments.

SAP S/4HANA CLOUD

SAP S/4HANA Cloud is a Leader in this year's ERP Value Matrix due to the capabilities the product suite can deliver. S/4HANA Cloud is delivered for several industry use-cases including Enterprise Management, Professional Services, and Marketing, as well as a private cloud deployment option. On October 31, SAP released S/4HANA Cloud 1611 with a host of enhancements to the product. Some highlights include end-to-end asset maintenance management, updated revenue recognition capabilities helping the universal journal to be the single source of truth, employee time management applications, and an available-to-promise application

that helps companies manage filling sales orders optimally. S/4HANA Cloud also allows for integrations with other SAP products such as SuccessFactors, Ariba Network, and SAP Financial, improving the functional reach of the solution. SAP demonstrates strong usability with applications delivered with SAP Fiori UI.

In response to customer feedback, SAP has undertaken several steps to provide clear guidance on what's next for the S/4HANA application landscape. It has already published 3-year product roadmaps for SAP S/4HANA, as well as its first rolling-four-quarters roadmap for SAP S/4HANA Public Cloud. As SAP releases additional services and capabilities that chart a customer's path to cloud and ease the transition, its position in the ERP Value Matrix will improve.

SYSPRO

SYSPRO remains a Leader in this year's Value Matrix based on its continued investment in advanced capabilities. SYSPRO provides ERP solutions for cloud, on-premise, and mobile deployments, with a focus on manufacturers and distributors. An organically developed solution rather than integrated through acquisitions, SYSPRO delivers industry-specific capabilities and helps customers streamline processes via a customizable user interface.

In September 2016, SYSPRO announced six advancements that its customers can leverage:

- SYSPRO Azure Cloud Platform. Through a partnership with Microsoft, SYSPRO will be delivered as a platform as a service (PaaS) on Microsoft Azure cloud infrastructure.

- SYSPRO Harmony. Designed to address complex tasks, the cloud platform combines collaboration tools with machine learning and data analytics to help customers with advanced and difficult issues.

- SYSPRO Bots. An artificial intelligence (AI) within SYSPRO ERP that can be used to streamline business processes.

- SYSPRO Predictive Search. A native, customized search engine that can rapidly call up relevant information for the user.

- SYSPRO WebViews. An update to the UI delivering role-based views, key performance indicators, and customizable dashboards.

- CRM for SYSPRO. A cloud customer relationship management (CRM) module with features that users require to build pipelines and manage contracts.

SYSPRO's investments enable it to deliver services to its customers on par with large EPR vendors. Bringing its customer base up to speed and demonstrating how they can benefit from capabilities today, remain SYSPRO's biggest challenges moving forward. In 2017, SYSPRO plans to release capabilities that include artificial intelligence, machine learning, and IoT.

UNIT4

Unit4 retains its place in the Leader quadrant of this year's ERP Value Matrix. With a series of announcements since the last Value Matrix, Unit4 continues to invest in providing the best people-centric solutions. Building on its moves from last year, Unit4 continues to focus on five industry verticals: professional services, education, government, non-profit, and property management. Key announcements included:

- Integrated EAM. In February, Unit4 announced an end-to-end enterprise asset management solution (EAM) for its building and property asset management customers.

- Professional services automation. In April, Unit4 released a professional services automation (PSA) solution that was cloud-first and mobile-ready to help customers manage projects, resources, and timekeeping. Unit4 also integrates with Slack.com to help companies collaborate and bring all communications to one place.

- Digital assistant. Unit4 announced a Digital Assistant that uses pattern recognition, natural language analysis, and 3rd-party data sources to help users with complex tasks and automatically perform repetitive, low-value tasks.

- prevero acquisition. In July, Unit4 announced it was buying prevero, a corporate performance management and business intelligence solution provider. Helping Unit4 expand into Germany's mid- and enterprise market, prevero is consistent with Unit4's efforts to develop self-driving solutions for service organizations.

Unit4 seeks to address 80 percent of a customer's needs out-of-the-box, which can ease the implementation and speed a customer's time to value, driving its high usability. Further moves to automate tasks and expand capabilities into additional industry verticals will increase Unit4's position in the Value Matrix.

EXPERTS

Experts in the ERP Value Matrix include Aptean, IFS, IQMS, Oracle PeopleSoft, QAD, Rootstock, and VAI.

APTEAN

Aptean remains an Expert in this year's ERP Value Matrix. With several acquisitions since the last Value Matrix, Aptean has addressed a number of key areas in its product offerings. In December 2015, Aptean bought Computron Software, which supplies accounting and financial ERP software to mid-market and multinational organizations, building on Aptean's global presence. In January 2016, Aptean bought AssetPoint, a provider of computerized maintenance management software and enterprise asset management solutions, extending Aptean's reach in sectors such as oil and gas, manufacturing, food and beverage, and chemicals. Additional acquisitions of GQ Life Sciences, a life science patent search solution provider, and the Government & Enterprise Management Solutions division of StarDyne Technologies, which provides a suite of solutions to government and private sector organizations, further expand Aptean's diversification and expertise into specific industry verticals and sectors. Continued investment into product gaps, through acquisition or in-house, will improve Aptean's value proposition in the market; however, it also creates the challenge of integrating all the solutions into coherent offerings. Future releases that demonstrate streamlined interfaces will improve Aptean's Matrix position.

IFS

IFS is an Expert in the 2016 ERP Value Matrix providing vertical ERP solutions for the automotive, aerospace and defense, energy and utilities, high tech, industrial manufacturing, oil and gas, process manufacturing, and contracting industries. With 11 industry-specific verticals in total, delivering a functionally comprehensive solution is one of the primary focus areas for the company. IFS Applications can be deployed on premise or in the cloud either as an infrastructure-as-a-service solution or through its Managed Cloud offering – both options are single-tenant deployment models that leverage the Microsoft Azure cloud platform. IFS has made its UI a top priority with customizable IFS Lobbies being offered out of the box in IFS Applications 9. In October 2016, IFS announced the launch of its IoT solution, which enables companies to integrate important data into IFS Applications. The IFS IoT Business Connector delivers the architecture customers need to capture IoT data, analyze it for insights and operationalize it for maximum benefit to their business. With a major update of IFS Applications every three years, IFS has built its application to make it easy to configure, and thus reduce the need for customizations.

Last year, the private equity firm EQT became IFS' majority shareholder and has encouraged acquisitions as a part of the company's growth strategy. IFS had already been in acquisition mode, buying companies nearly every year for the last eight years, including the Finnish firm MainIoT earlier this year. Nucleus expects IFS to

continue to aggressively add capabilities and gain market share both organically and through acquisition, which should improve the value its customers achieve as the capabilities are integrated into a unified offering.

IQMS

IQMS continues as an Expert in the 2016 ERP Value Matrix, delivering ERP software for discrete and batch process manufacturers in the mid-market. Offering both on-premise and cloud deployment options to customers for its EnterpriseIQ ERP system, IQMS announced its "Choice is the New Cloud" program in March 2016, giving customers the option of deploying in a managed cloud, as hosted licensed software, or on-premise. To service the diversity of requirements by manufacturers, IQMS offers software that addresses specific industries including aerospace and defense, assembly, automotive, food and beverage, medical, plastics, packaging, and metals.

In April 2016, IQMS debuted its WebIQ browser-based user interface which allows EnterpriseIQ to be accessed from any web-enabled device. With the same functionality as the existing interface, IQMS is working to make adoption and transition to the new UI easy for users. Additionally, IQMS expanded its Partner Program to supports its expansion in Latin America, Europe, and North America. With its comprehensive solution designed to function as ERP, manufacturing execution system (MES), and supply chain, IQMS delivers strong functionality and is taking steps to improve its usability with the WebIQ announcement. When WebIQ becomes generally available and customers begin to get value from it, Nucleus expects IQMS' position in the Value Matrix to improve.

ORACLE PEOPLESOFT

Oracle PeopleSoft is an Expert is this year's Value Matrix. Delivering a suite of tools to enterprises such as financial management, enterprise services automation, supply chain management, supplier relationship management, and human capital management, PeopleSoft is one of the most functionally extensive offerings on the market. In February 2016, Oracle announced it was offering PeopleSoft in conjunction with Oracle Compute Cloud Services, Oracle's infrastructure-as-a-service (IaaS) product. The move gives PeopleSoft users the option to self-provision network, compute, and storage resources. At OpenWorld 2016, Oracle showed its roadmap for expanding the Fluid UI, which is available with PeopleTools 8.55. With updated mobile capabilities, Oracle is giving customers the option of choosing whether they switch to Fluid UI or keep the Classic UI based on business needs. Additionally, Oracle allows customers to selectively adopt new PeopleSoft features based on their business strategy. Oracle also highlighted how customers are getting value from Elasticsearch with faster queries, replacing Secure Enterprise Search

(SES). The improvements Oracle has released since the last Value Matrix indicate that it is continuing to invest. The push to cloud is true for PeopleSoft customers, who can leverage PeopleSoft Cloud Manager to migrate to the Oracle Cloud via "Lift and Shift". Though some of the improvements to PeopleSoft are modest, the expansion of the modern UI represents a step in the right direction.

QAD

QAD continues as an Expert in the 2016 Value Matrix, having made several key enhancements to its product offerings since the last Matrix. QAD deliveries ERP solutions focused exclusively on manufacturing customers in industry verticals such as automotive, consumer products, food and beverage, high-tech, industrial, and life sciences. One of the first ERP vendors to offer a cloud solution, QAD continues to offer QAD Enterprise Applications, its on-premise solution, as well as blended cloud deployments. QAD's ERP products for cloud and on premise deliver similar functionality; however, QAD Cloud ERP includes Enterprise Asset Management as well as an updated HTML5-based user experience. The rollout of the new UX for Cloud ERP, which provides native mobile support, began in 2015 and has gone through four subsequent updates. The latest version includes embedded operational analytics and collaborative dashboards, helping customers gain insights and be more productive.

In March 2016, QAD released 2016.0 which included several enhancements, including updates to QAD Financials, based on customer feedback and internationalizations to support legal requirements of more than 60 countries. QAD Automotive customers also got capabilities to help optimize shipping and receiving as well as greater visibility into inventory levels. Additionally, QAD released enhancements to QAD Automation Solutions which collects shop floor data and provides visibility to reduce errors. QAD is leveraging its automation solution, which includes its enterprise asset management module, as the foundation for greater IoT functionality. In November 2016, QAD announced a suite of enhancements for Transportation Management System 2.0, such as an improved UI and an expanded carrier network. QAD is focused squarely on its Cloud ERP solution, which distinguishes it from some of the other manufacturing-centric ERP vendors.

ROOTSTOCK

A new addition to the ERP Value Matrix, Rootstock is an Expert in the 2016 edition. Built natively on the Salesforce platform, Rootstock's cloud ERP solution focuses on manufacturers in high-tech and electronics, industrial equipment, machine shops, engineered-to-order, and project-based operations, as well as wholesale distribution. Dedicated to the midmarket, Rootstock leverages the elasticity of the Salesforce platform to deliver its solutions to customers ranging from small, discrete

manufacturers to large, multi-location operations. Some of the capabilities Rootstock delivers include sales and purchase order management, inventory management, material, scheduling, and capacity planning, product lifecycle management inventory, cost and product control, replenishment planning, and production engineering. In 2016 Rootstock added financial capabilities such as accounts receivable, account payable, and general ledger, as well as the ERP Performance Dashboards application powered by Salesforce Wave Analytics. The dashboards are designed to provide insights into operational KPIs and support multi-company, multi-division, and multi-side enterprise customers. Moving forward, Rootstock plans to release a steady cadence of capabilities in 2017, as well as bringing its solution to Salesforce Lightning, which will improve its UX and usability positioning on the Value Matrix in the future.

VAI

VAI continues as an Expert in the Value Matrix. Delivering ERP solutions to the midmarket primarily in North America-based companies, VAI S2K Enterprise includes applications for financials, distribution, manufacturing, and retail/service. In additional to industry-vertical solutions for food and pharmaceuticals, VAI offers extended capabilities and applications that help customers extract value such as mobile functionality, business analytics, warehouse management, e-commerce, and CRM. VAI offers its products as licensed cloud software hosted in a private cloud or as a traditional on-premise deployment.

VAI S2K Enterprise has focused on improving usability through the Smart Center that delivers a configurable portal-base user experience with portlets that can show KPIs depending on role. With increased mobile functionality and an enterprise HTML5 client, VAI is continuing to push its customers into a digital future. Further investments in easing the implementation process should help VAI improve its position in the future iterations of the Value Matrix.

FACILITATORS

Facilitators in the ERP Value Matrix include FinancialForce, Kenandy, Microsoft Dynamics NAV, and Qualiac.

FINANCIALFORCE

FinancialForce is a Facilitator in this year's ERP Value Matrix, with its focus primarily on service-centric customers across a number of industries. Intuitive UI and native integration with Salesforce CRM running on the Salesforce platform help FinancialForce achieve excellent usability. The ERP cloud applications FinancialForce delivers fall into four categories: Salesforce CRM, Professional

Services, Financial Management, and Human Capital Management. FinancialForce covers industry verticals for Health Care, Financial Services, Architecture and Engineering, Professional Services, Nonprofit, and Software Service. The professional services applications are designed to increase automation, including modules for resource management, project management and financials, billing and revenue recognition, and reporting. The financial management capabilities extend to inventory management, spend management, and accounting and finance. In analyzing FinancialForce, Nucleus found customers could achieve significant value from running ERP and CRM on the same platform (Nucleus Research, *q168 – Customers say FinancialForce is sticky*, August 2016). Investments to extend the functionality and additional industry verticals of the solution will improve FinancialForce's placement in the next ERP Value Matrix.

KENANDY

Kenandy is a Facilitator in the 2016 ERP Value Matrix and is a new addition to the Matrix. Kenandy delivers business-ready objects that cover order-to-cash, manufacturing, supply chain, financials, and distribution. A cloud solution built on the Salesforce platform, Kenandy helps manufacturing companies manage their warehouses, inventory, and orders, as well as increasing the automation capabilities for procurement and the financial reconciliation and close. In addition to ERP, customers with supply chain needs gain visibility and can leverage mobility and collaboration tools to adjust to changing conditions. Kenandy is Lightning-ready, which gives it an intuitive and user-friendly interface, and the objects it delivers can be mapped to business processes, ensuring Kenandy covers a large percentage of customers' needs out of the box. In March 2016, Kenandy raised $55 million in venture capital, which the company plans to use to make additional features and enhancements to the product. As a result, Nucleus expects Kenandy will make strides to improve its matrix position on future iterations.

MICROSOFT DYNAMICS NAV

Microsoft Dynamics NAV is designed for small and medium-sized enterprises or subsidiaries and is a Facilitator in this year's ERP Value Matrix. Deployed in the cloud on Microsoft Azure or on-premise, Dynamics NAV includes functionality for financial management, supply chain, manufacturing, distribution, sales and marketing, human resources, project management, business intelligence, and reporting. Dynamics NAV 2017 was released October 2016. The release gives customers increased insight with embedded Microsoft PowerBI reports and dashboards and deeper interoperability with Office 365, as well as the option to predict future cash flow and understand seasonality with the addition of Cortana Intelligence. Dynamics NAV 2017 brings the power of machine learning and Microsoft Azure to deliver easy-to-use predictions and advance analytics within the solution. Nucleus predicts that

Microsoft will continue to invest in the solution and push more companies to deploy in the cloud, thereby reducing customizations and making upgrades easier.

QUALIAC

In this edition of the Matrix, Qualiac is once again in the Facilitator quadrant. The France-based company provides ERP services for industries including business services, healthcare, manufacturing, banking and finance, media, pharmaceuticals, food processing, retail, foundations/NGOs, and real estate. With a highly configurable, yet simple user experience and workflows, Qualiac sets the standard for usability in this year's Value Matrix. Focused on the mid-market and large organizations, Qualiac has modules that address activity management, CRM, supplier management, travel and expenses, and the most recent addition, e-sourcing. With robust report generation, collaboration tools, and Microsoft Excel integration, Nucleus expects Qualiac's position in the Value Matrix to continue to strengthen as it continues to add new capabilities and expand into new markets.

CORE PROVIDERS

Core Providers in the ERP Value Matrix include Microsoft Dynamics GP, Plex, Sage, SAP Business ByDesign, and SAP Business One.

MICROSOFT DYNAMICS GP

Microsoft Dynamics GP, the mid-market ERP for small and medium-sized businesses (SMBs), helps to broaden Microsoft's product offerings, increasing both usability and functionality. As a Core provider in the Value Matrix, Dynamics GP deploys modules organized into categories, which include financial, inventory, manufacturing, purchasing, project, payroll, and sales. In May 2016, Microsoft Dynamics GP 2016 was released in keeping with the application's annual update cadence. The 2016 version's major development is the switch to HTML5 interface for the GP Web Client, moving away from Silverlight. Using HTML5 for web client interface allows Dynamics GP to support multiple browsers and mobile devices, which improves usability. Dynamics GP 2016 has also added a host of enhancements with its latest release, such as Power BI reports to home pages, Sales All-in-One View window, and project expense document attachments. Microsoft has signaled that it will continue to invest in additional enhancements with future releases, which should translate to further improvement in its position on the Value Matrix.

PLEX

Plex maintains its position in the 2016 Value Matrix as a Core Provider. The Michigan-based ERP vendor has made a few notable announcements since the last Value Matrix that are bringing value to customers.

In April, Plex announced it was introducing two Plex Insight applications: IntelliPlex Financial Analytic and Sales & Order Management Analytic. Financial Analytic is designed to meet the needs of CFOs and financial leaders, delivering key performance indicators (KPIs) and metrics. Sales & Order Management Analytic application caters to sales leaders providing drill-down analysis of important data like product mix revenues, lead times, and order fill rate. With over 200 customers already using the analytic solutions, Plex has indicated it plans to release additional applications in the future.

In August Plex acquired DemandCaster which is a cloud-based supply chain planning solution. This comes only a few months after Plex Systems announced a suite of supply chain planning products, such as Master Scheduling, S&OP, and Distribution Planning. The acquisition means Plex can deliver end-to-end, cloud-enabled manufacturing execution, ERP, and supply chain planning to customers. The cloud deployments help Plex scale to satisfy the needs of both mid-market and enterprise manufacturers.

Plex is working to make manufacturing data more accessible and usable for customers through Plex Connect, which is an open integration framework. Plex partners and customers can leverage a portfolio of REST APIs to connect their own applications to Plex Manufacturing Cloud, helping customers fulfill their business needs. Along with an application that allows users to pull manufacturing data into Microsoft Office 365, Plex uses Microsoft Azure to ensure scalability and connectivity for its customers. As Plex integrates its DemandCaster acquisition, Nucleus predicts that more customers will realize value from its end-to-end capabilities.

SAGE
Sage is a Core Provider in the 2016 ERP Value Matrix, offering solutions for small, medium, and enterprise customers. Sage X3 is Sage's primary ERP offering and can be deployed as hosted, on-premise, or SaaS solution. With capabilities, such as warehouse and inventory management, sales and marketing, accounting, purchasing and vendor management, Sage X3 supplies ERP to a wide range of industries including distribution, manufacturing, construction, services, and process manufacturing. Since the last version of the Value Matrix, Sage has made several moves to enhance its value to customers:

- Intensifying its push into the North American market, Sage opened a headquarters in Atlanta last October.

- In December 2015, Sage announced the launch of Sage Live on the Salesforce AppExchange, allowing small business customers to connect their CRM with accounting and finance.

- In July 2016, Sage announced Update 10 to Sage X3, which became available in August, and included additions to the cloud application ecosystem such as Sage X3 People Cloud for payroll and Sage X3 Distribution Cloud.

- Sage has partnered with Fairsail, a cloud HR management solution, to complement its existing payroll functionality.

The further investment in its cloud offering will see Sage's position in the Value Matrix continue to improve as its global customer base grows.

SAP BUSINESS ONE

SAP Business One is a Core Provider in the 2016 ERP Value Matrix. An SMB-focused solution that can be deployed on-premise or in the cloud, SAP Business One's latest update came in June 2016. Business One offers solutions to businesses in industrial manufacturing, professional services, wholesale distribution, retail, and consumer products. Enhancements announced in June included modules for project management and product demand forecasting capabilities. Business One remains focused on the core ERP needs of SMBs, delivering solutions to manage accounting and finance, sales and customer management, operations, purchasing, inventory tracking and management, and reporting. SAP's focus on moving Business One's capabilities to SAP HANA should deliver additional product enhancements to customers that improve Business One's value proposition.

SAP BUSINESS BYDESIGN

SAP Business ByDesign is a Core Provider in the 2016 ERP Value Matrix. A cloud-based ERP, Business ByDesign is geared toward mid-market and subsidiary customers with capabilities designed for manufacturing, professional service organizations, and wholesale distributors. With release 1608, SAP Business ByDesign received several enhancements and updates to improve the user experience. For example, new views for financial managers include a reports view, intercompany journal entry vouchers view, and payment run view to fill in some gaps that can help users quickly perform tasks and be more efficient. To further help product usability, version 1608 includes the ability to define workflow rules in project management. With a multitude of integration options, Business ByDesign can help companies consolidate their business technology after an acquisition and keep pace as the business grows organically. As SAP continues to invest in Business ByDesign, making the product a more compelling offering for the lucrative mid-market, its position in the Value Matrix should improve.