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OFFERING OVERVIEW

Oracle ERP Cloud Ready for Era of Autonomous and Self-Driving Apps

Advancements in Adaptive Intelligence Drive Future Post-Digital Augmentation and Automation

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EXECUTIVE SUMMARY

The confluence of an improved market outlook, the shift to the cloud, the pressure of digital transformation and replacement cycle dynamics creates one of the biggest growth opportunities for enterprise resource planning (ERP) refreshes. New cloud deployments provide a catalyst for improving and automating back-office processes like never before.

The Market Overview of which this report is a part examines the wide range of cloud ERP offerings through a lens of product- versus services-centric solutions and unregulated versus regulated solutions. While the number of vendors in the market has gone down due to mergers and acquisitions, the consolidation has led to concentrated platform investments in the cloud and with exponential technologies such as artificial intelligence (AI), big data, augmented reality, Internet of Things, 5G and blockchain.

Successful deployments will achieve the elusive goal of improving efficiencies and preparing for exponential growth. The use of AI in the back office will power the next wave of ERP advancements.

This Offering Overview examines Oracle ERP Cloud. It identifies key differentiators, examines functional capabilities, considers the offering's strengths and weaknesses, and provides use cases. Technology buyers should use this report to evaluate Oracle ERP Cloud for implementation.

Business Themes


New C-Suite


Future of Work


Technology Optimization

ABOUT ORACLE ERP CLOUD

Overview

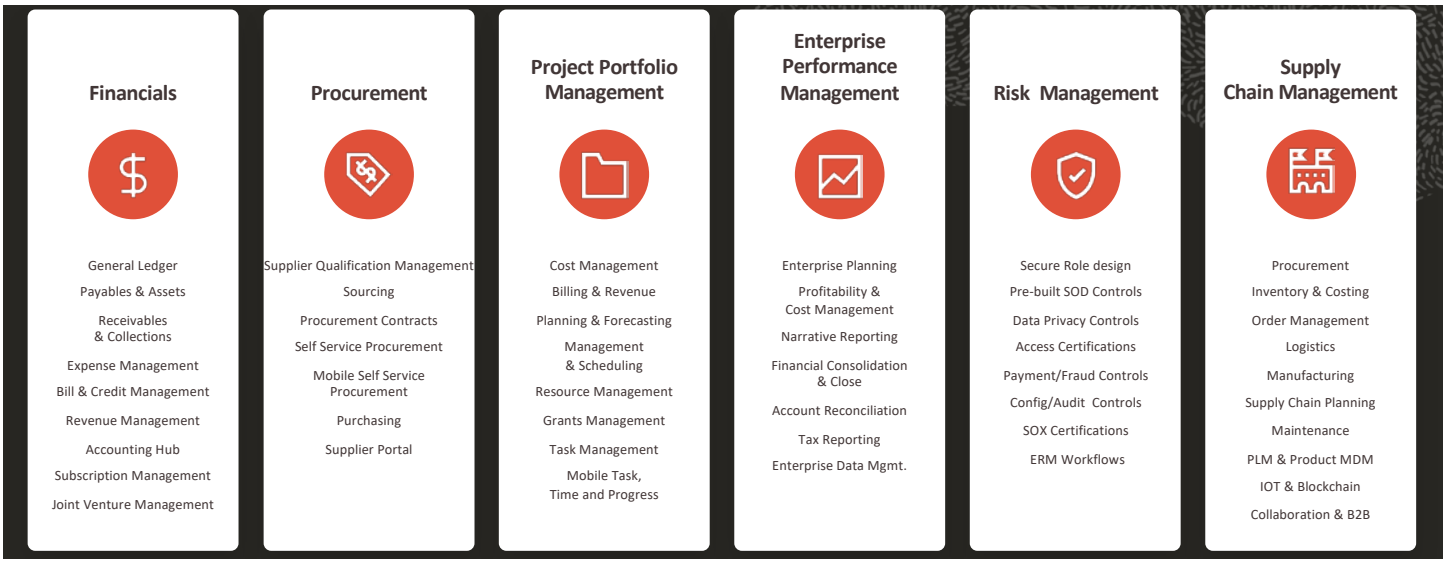
Released in 2013, the Oracle ERP Cloud apps have grown to more than 6,500 customers for the venerable Redwood Shores, California, technology giant. Oracle's ERP Cloud numbers do not include the human capital management (HCM) offering. Oracle's ERP Cloud includes a broad suite of enterprise resource management (ERP)/enterprise project management (EPM) and supply chain management (SCM) offerings. This cloud ERP suite supports both product-centric and services-centric requirements.

Oracle ERP Cloud Release 19D, the latest version, focuses on four main differentiating investment themes for operational excellence, customer success, industry and innovation. Operational excellence focuses on unified releases, smaller maintenance windows, improved customer communications and more-automated testing. Customer success includes more customer-driven road maps and Oracle Soar. Industry investments include oil and gas and asset intensive industries, manufacturing and consumer packaged goods (CPG), higher education and the public sector, health care, high-tech, and financial and professional services. Innovation investments focus on intelligent user experience (UX), transaction process automation, audit and compliance, and automated recommendations. A major native capability is the embedding of adaptive intelligence, which provides recommendations within major processes. Customers that choose Oracle ERP Cloud often seek multinational and global deployments, have large enterprise requirements, require vertical expertise and expect one major technology partner with Oracle.

Oracle ERP Cloud Applications include (see Figure 1):

- Financials
- Project Management
- Procurement
- Risk Management
- Planning and Budgeting
- Financial Close
- Performance Reporting
- Enterprise Data Management

Figure 1. Inside the Oracle ERP Cloud Family of Applications



Source: Oracle

Market Segment

ERP refers to a transactional system that manages the back-office functions of an enterprise: finance, human resources, supply chain and logistics, and project management. Cloud-based systems refer to a deployment option where the software is hosted on a vendor's server. Multitenant cloud solutions refer to a deployment option where only one copy of the software code is available to all customers, though the data is unique to each customer.

Modern global cloud ERP suites encompass a wide range of end-to-end business processes, including:

- Procure to pay
- Order to cash
- Hire to retire
- Assess to acquire
- Financial plan to report
- Project initiation to project closure

Constellation Research estimates the global cloud ERP market will be worth $40.1 billion by 2025 and have a compound annual growth rate of 9.3%. Surveys among customers show that BFSI (that is, banking, financial services and insurance) is the top industry and North America is the top market. Key vendors in this Market Overview include: Epicor, FinancialForce, Infor, Microsoft, Oracle, Oracle NetSuite, Sage, SAP, Unit4 and Workday.

Oracle's customers tend to fall into the midsize enterprise to large enterprise categories, with US$200 million to more than US$10 billion in revenues and 500 employees to more than 20,000 as the norm. ERP/EPM includes financials, project management, procurement, risk management, planning and budgeting, financial close, performance reporting and enterprise data management across a common data model. HCM includes global HR, talent management, workforce rewards and workforce management. SCM supports supply chain planning, manufacturing, order management, product life-cycle management, procurement, supply chain collaboration and visibility, maintenance, logistics and inventory. Oracle releases updates four times a year. Given Oracle's size and breadth of offerings, most major vertical industries are a fit for Oracle ERP Cloud offerings.

Market Trends

Global cloud ERP evolved from the post-digital ERP era to the artificial intelligence (AI)-driven back-office era. In fact, the post-digital ERP era began in 2010 with new architectures built for the cloud and massive data sets. Since then, innovations in post-digital ERP have ushered in a wave of new technology platforms, user experiences and intelligence as well as new opportunities to drive down the cost of ownership while enabling constant streams of innovation. Constellation sees a shift from transaction systems to AI-driven systems (see Figure 2).

In our conversations with more than 200 technology leaders, 10 major trends have emerged for 2020 and beyond for post-digital ERP users:

1. **Functional silos make way for employee experiences.** When ERP systems emerged in the 1980s, they solved subdepartmental issues such as accounts receivable, accounts payable and treasury. Over time, ERP grew to include departmental components such as finance, HR applications, procurement, supply chain and manufacturing. As mega-ERP suites debuted, the notion of a single source of truth

emerged for the back office. With information centralized in the cloud, ERP today can deliver the key system of record for an enterprise and the foundation for better employee experiences. These employee experiences augment human decisions to enable next-best actions.

Figure 2. Ten Global Cloud ERP Trends for 2020 and Beyond

Source: Constellation Research

2. **The push to automate manual processes drives sustainable efficiency.** A plethora of human-managed manual processes often drives up the cost of ownership for ERP. Given the exponential volume of data, the highly repetitive nature of work and the massive nodes of interaction, over 70% of back-office processes make great candidates for automation. Early adopters often choose automation tools such as robotic process automation (RPA) and process mining to deliver a significant return on investment and help reduce operational overhead and costs.

3. **Organizations deliver democratization of decisions at all levels.** Information in older ERP systems mostly provided power users with key insights. Employees, casual users and partners didn't have the same level of access. However, modern back-office environments empower all users with contextually relevant information. The shift from hoarding information to delivering the right information at the right time, for the right context, in the right form factor and in the right security model now means every employee, contractor and partner can be empowered with information to speed decision-making, improve customer experience and mitigate risk.

4. **Single-process focus expands to multiparty value chains.** Classic mega-processes such as invoice to close, procure to pay, hire to retire and order to cash traversed functional fiefdoms. Early adopters

of cloud ERP seek multithreaded value chains that support a multiparty-centric view. These parties could include the employee, customer, supplier, partner and others. The convergence of classic mega-processes makes way for multiparty value chains. Context is key as each role sees only the relevant information at the right time.

5. **Push for post-sale revenue drives support for subscription business models.** The shift from ownership to access requires ERP systems to support subscription business models. These new models enable post-sale revenue opportunities such as installation, warranty and vendor-managed inventory. Subscriptions also require regulatory compliance for revenue recognition rules such as ASC 606. Expect ERP to provide growing support to customer success management platforms and new outcomes-based pricing models.

6. **Risk mitigation, regulatory compliance and fraud prevention drive adoption of AI in ERP.** While AI has many use cases, fraud prevention helps organizations avoid bad outcomes. Prevention applies cognitive reckoning to identify potential threats. The goal is to mitigate risk, achieve regulatory compliance and prevent disasters. Customers also seek AI to augment human decisions and suggest next-best actions.

7. **Hybrid cloud deployments take center stage as integration improves.** The shift to the cloud comes with multiple deployment options. Most organizations have cloud components tied to an on-premises core. Over time, an increasing number of deployments will shift from hybrid approaches to pure cloud models. Consequently, integration technology has improved in ease of use, ability to orchestrate and cost of ownership.

8. **AI powers the new user experience.** From chatbots to mixed reality, AI has entered the ERP market. Systems that mimic four out of the five senses—sight, speech, listening and touch—have entered the mainstream. Natural language processing and video intelligence enable large quantities of unstructured data such as documents, chats, log files and transactions to be ingested and organized into logical categories using techniques such as topological data analysis. Customers expect the ability to use voice as an interface as much as touch and gestures.

9. **Verticalization shifts to micro-verticalization and platform ecosystems.** Customers expect their cloud-based ERP solution to deliver on deep industry vertical functionality. Customers also expect their ERP vendor to provide integration support for adjacent solutions in the ecosystem. Why? Years of experience have taught customers that they need a platform to extend as well as one that is part of a larger ecosystem.

10. **Organizations seek one core vendor to trust for innovation.** The ERP market landscape has shrunk from hundreds of vendors to a dozen core providers. During the merger and acquisition binge over the past decade, customers have emphasized the stability of a vendor over innovation. With a refresh cycle ahead, customers have increased their expectations to obtain both stability and innovation from one core vendor.

Partnerships and Alliances

Oracle's key system integrator partners include global Tier 1 players such as Accenture, Deloitte, IBM, Infosys, KPMG, PwC, Tata Consulting Services and Wipro.

FUNCTIONAL CAPABILITIES

Over a thousand features have been delivered since release 18B in Oracle ERP Cloud. Key investment themes for Oracle ERP Cloud include the following.

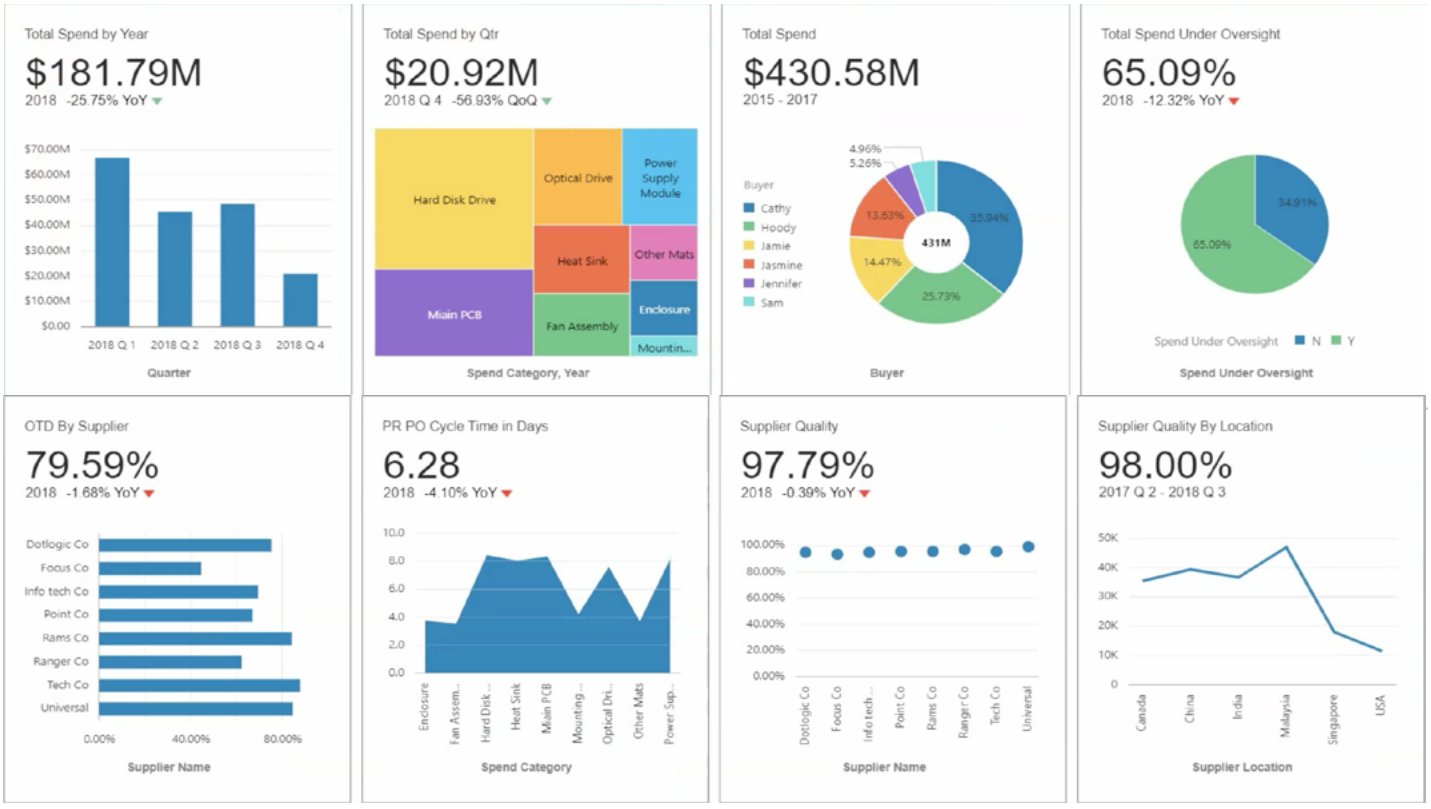
Post-Digital Back-Office Innovation Takes Advantage of Intelligent Automation and Adaptive Intelligence

Oracle has gone full-force on applying its AI—aka, adaptive intelligence—capabilities embedded in the applications. The adaptive intelligence capabilities are not add-on features, nor are they additional modules. The design point for Oracle includes data entry automation, smart insights, scoring, recommendations and ultimately automation.

Adaptive intelligence is embedded inside the apps core as the AI Apps Platform. Built on decision science and machine learning, the capabilities manifest in four ways inside Oracle ERP Cloud:

- **Intelligent UX.** Users gain prepopulated workflows and improved user experiences as content and context transform the user experience. New interaction experiences account for mobile, augmented reality and robotics. The system can contextually personalize home-page layout, content placement, color palettes, images, logo, icon shape and icon size. Examples of AI as the new UX include the intelligent list of values and intelligent dashboards (see Figure 3).

Figure 3. Intelligent Dashboards Speed Decision-Making



Source: Oracle

- **Recommendations.** Cloud ERP users gain next best actions with relevant recommendations such as optimized working capital and increased strategic focus. In the case of intelligent payment discounts, the system can generate a vendor-specific discount offer in exchange for early payments based on supplier profiles and risk data. In supplier categorization, multifactor categorization and ranking of suppliers enables procure-to-pay optimization. Key capabilities include approval recommendations, recommendations for project staffing, correlated predictions, intelligent account derivation, supplier recommendations, expense policy recommendations and predictive maintenance recommendations.

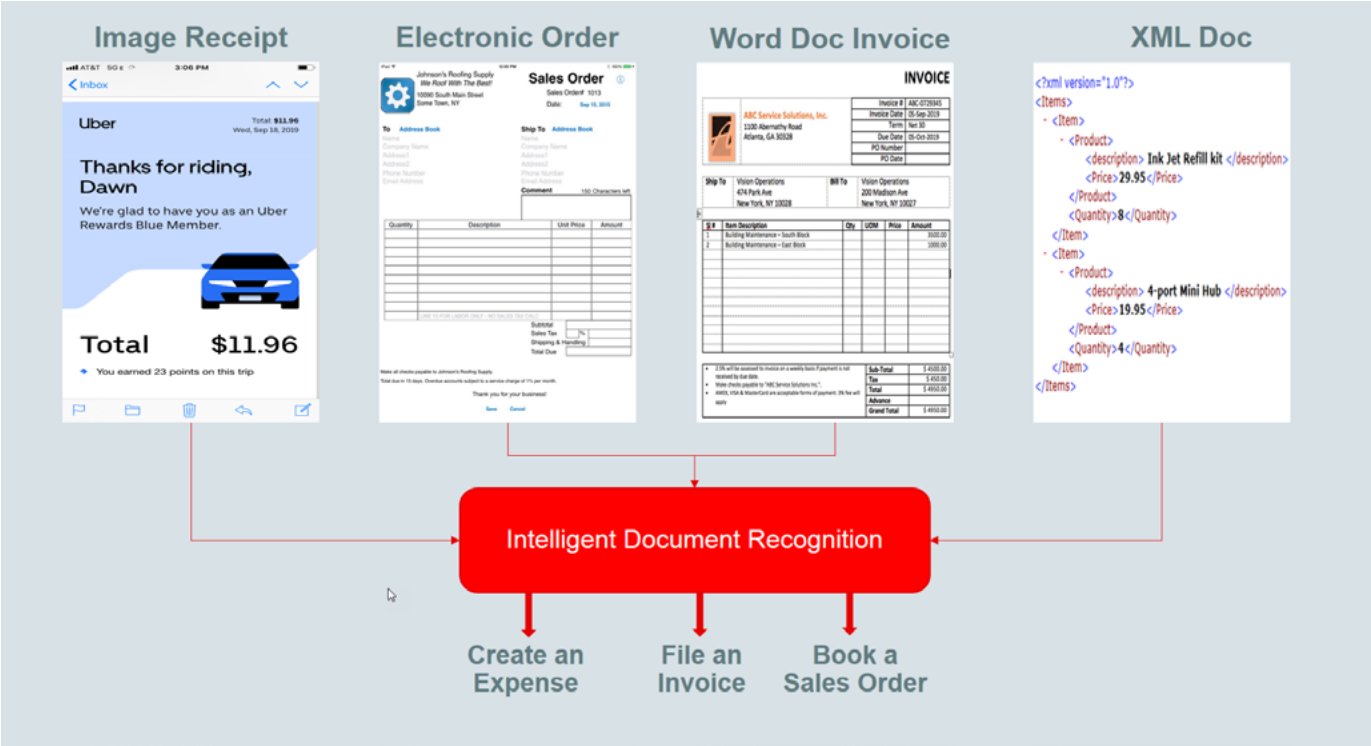
- **Transaction process automation.** More than standard RPA or process mining, the transaction process automation capabilities enable both touchless transactions and continuous close. Examples include automated expense approvals, intelligent document recognition and smart close. Customers have raved about the expenses digital assistant, which uses intelligent document imaging and intelligent performance management to take an image receipt, electronic receipt, Word doc or XML doc and use it to create an expense report, file an invoice or book a sales order (see Figure 4).

- **Audit and compliance.** Adaptive intelligence in action addresses policy and compliance as well as anomalies and fraud detection. Customers gain invoice factoring via blockchain, fraud detection, security analysis for separation of duties and high-risk user access monitoring.

Industry Investments Reflect Customer-Led Requests

Oracle has taken to heart the need for more customer feedback in design thinking-led product road-map creation. The approach has resulted in specific investments for six critical industries: financial and professional services, health care, higher education and public sector, high-tech, manufacturing and CPG, oil and gas, and asset-intensive industries.

Figure 4. Transaction Process Automation Comes to Life



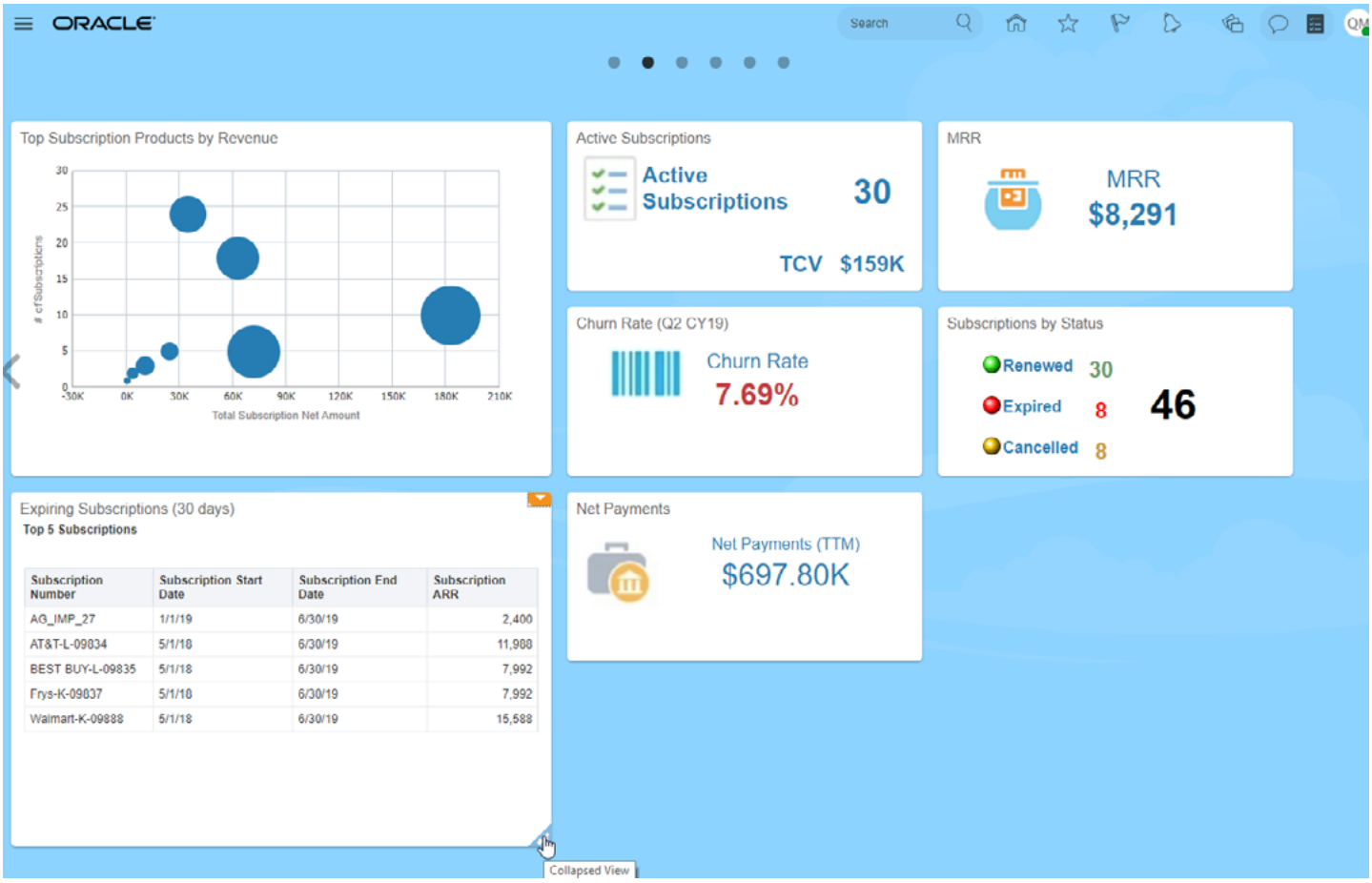
Source: Oracle

For example, Oracle beefed up core banking integration for financial services, recruitment-based staffing and resource capacity planning for professional services. In high-tech, it added key subscription management capabilities as organizations moved from product to services, to experiences and outcomes (see Figure 5). Health care got a boost in inventory policy planning, clinical integration and patient-level costing. Manufacturing and CPG saw improvements in project supply chain, revenue management, zero-based budgeting, process manufacturing and channel revenue management. Oil and gas and asset-intensive industries received new capabilities in enhanced asset management and joint venture management. Higher education and the public sector received key student systems enhancements, continuing education, financial planning, research institution support and PS budgeting.

Operational Excellence Improves Customer Peace of Mind

Total cost of ownership has often been used as a key criterion in the evaluation of software ownership. However, in a cloud world, the focus is not only on cost but also on reliability, flexibility and availability. Customers expect peace of mind. In fact, Oracle has made significant investments in improving

Figure 5. Subscription Billing Key to Tech Industry Transition



Source: Oracle

operational excellence through predictable updates, zero-downtime initiatives, opt-in features and infrastructure evolution.

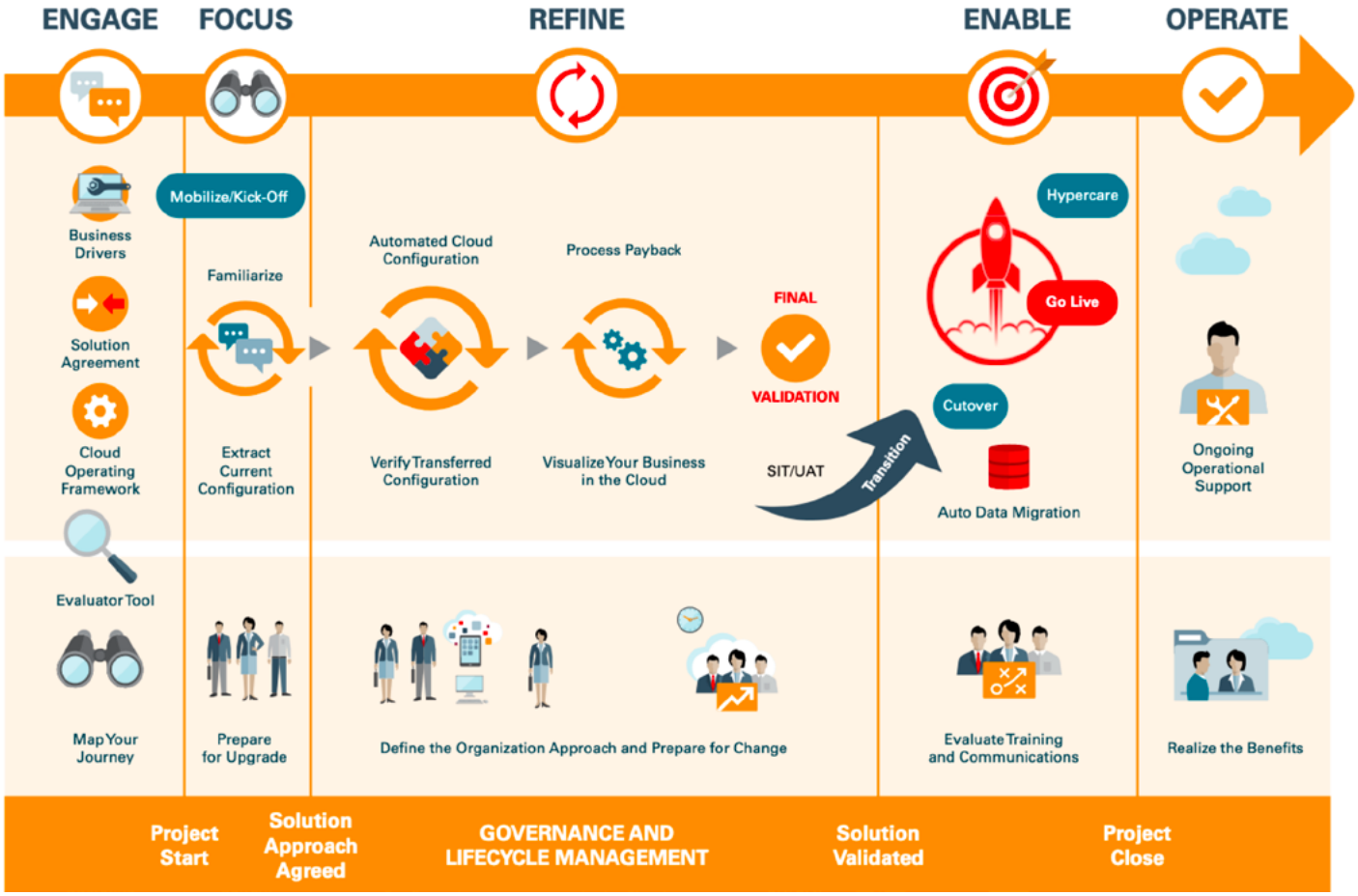
Predictable update schedules have helped clients plan for new features. In addition, the telemetry inside the apps enables Oracle to proactively troubleshoot issues with the applications and determine what features are being adopted and what features are not being utilized. These feedback loops enable Oracle to adjust as needed in future releases.

Focus on Customer Success Leads to More Go-Lives

The key to cloud customer success is rapid go-live and adoption. Oracle has three active programs to improve adoption and more quickly realize value, including Oracle Soar, customer-driven road maps and

advanced cloud experts (see Figure 6). Oracle Soar is a program that combines automated enterprise cloud application upgrades with automated tools and methodologies for cloud transition. Discovery assessments, process analyzers, rapid integration tools, and automated data and configuration migration utilities converge to improve migration and adoption. Interviewed customers have reported almost 33% to 50% in implementation time savings and cost reductions while utilizing the 20-week schedule approach.

Figure 6. Oracle Soar Improves Adoption with Oracle Customers



Source: Oracle

USE CASES

Core Finance Delivers on Agility for Global Customers

Global organizations seek Oracle ERP Cloud for agile finance transformation and large-volume transaction processing. For example, a Fortune 500 global shipper expanded to six countries for finance consolidation. A large global bank processed 9 million transactions per hour. A global consultancy consolidated multiple regional systems to support 40 countries. A large tech unicorn processed 10 million transactions per hour and replaced Workday. One large telecom removed 100% of its customizations and reduced costs by over 30%.

In general, midmarket to large global organizations seek Oracle for both automation and cost savings. Over time, the key benefits emerge as compliance and access to continuous innovation via cloud updates.

PRICING

Pricing for all Oracle products is transparent and updated on a regular basis on the Oracle website.

Published pricing for Oracle Enterprise Resource Planning Cloud is $625 per user per month, which includes:

- Advanced Collections
- Automated Invoice Processing (requires WebCenter Forms Recognition)
- Grants Management
- Project Contract Billing
- Project Financials
- Project Management
- Revenue Management

Oracle Enterprise Resource Planning Cloud – Hosted Employee is $35 per user per month and includes the following:

- Advanced Collections
- Automated Invoice Processing (requires WebCenter Forms Recognition)
- Expenses
- Financials
- Grants Management
- Project Contract Billing
- Project Financials
- Project Management
- Project Resource Management
- Revenue Management
- Task Management
- Time and Labor for Projects

Oracle Enterprise Resource Planning for Self Service Cloud is priced at $20 per user per month and includes:

- Expenses
- Project Resource Management
- Task Management
- Time and Labor for Projects

ANALYSIS AND OBSERVATIONS

Constellation sees the following strengths and weaknesses for Oracle ERP Cloud (see Figure 7).

Strengths

- **Global and international finance capabilities for Tier 1 and Tier 2 ERP requirements.** Oracle provides one of the major Tier 1 finance solutions and global ERP.

- **Strong foundation for autonomous and self-driving ERP.** Oracle has embedded the AI infrastructure required for early steps for intelligently automating transactions.

- **AI-powered user experiences.** Contextually relevant user experiences are powered by artificial intelligence. Oracle's UX paradigm enables personalization at scale.

- **Strong project management offering for a services-centric ERP customer.** Oracle brings strong project management and project-based ERP credentials to project-centric organizations.

- **Proven planning and budgeting capability.** As one of the leading planning and budget solutions, Oracle has built a CFO-centric and user-centric approach.

- **Rich industry-focused requirements and adoption across industry verticals.** Oracle has deep capabilities across many industries. These address not only regulatory requirements but also very industry-specific needs.

- **Tight integration with Oracle HCM and Oracle CX across a common data model.** Oracle is one of a few vendors that have a unified data model.

- **Deployment choice of Cloud at Customer, hosted and pure software as a service.** Oracle provides development choice.

- **Transparent pricing models.** Oracle is one of a few vendors that publicly publishes its price list.

Weaknesses

- **Need more professional services and implementation expertise.** Constellation's customers seek more choice and variety in the number of available Oracle experts.

- **Customers perception of the Oracle brand does not meet today's reality.** Oracle prospects often have a strong perception of the brand that is either positive or negative with very little middle ground. That perception does not reflect the actual capabilities and available offerings.

- **Channel conflict with Oracle Consulting Services and system integrator partners in the field.** Both clients and partners cite channel conflicts when seeking third-party implementation services.

Figure 7. Oracle ERP Cloud's Strengths and Weaknesses

STRENGTHS	WEAKNESSES
• Global and international finance capabilities for Tier 1 and Tier 2 ERP requirements • Strong foundation for autonomous and self-driving ERP • AI-powered user experiences • Proven planning and budgeting capability • Strong project management offering for a services-centric ERP customer • Rich industry-focused requirements and adoption across industry verticals • Tight integration with Oracle HCM and Oracle CX across a common data model • Deployment choice of Cloud at Customer, hosted and pure software as a service • Transparent pricing models	• Need more professional services and implementation expertise • Customers perception of the Oracle brand does not meet today's reality • Channel conflict with Oracle Consulting Services and system integrator partners in the field

Source: Constellation Research

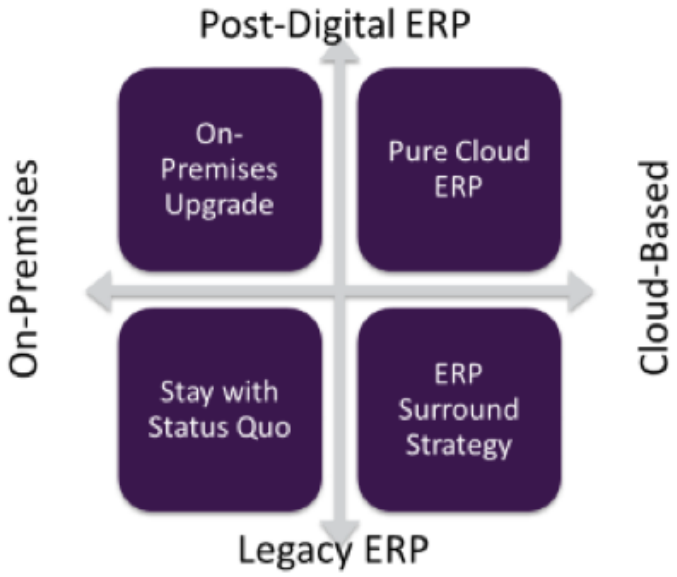
RECOMMENDATIONS

Start Optimization and Innovation with the Cloud, Then Build for AI

The road to post-digital ERP comes with many approaches. Evaluations should consider on-premises versus cloud and legacy ERP versus post-digital ERP (see Figure 8). Constellation recommends that customers do the following:

1. **Surround legacy systems with cloud innovation and hybrid integration.** Organizations seeking to try cloud ERP can start with adjacent cloud solutions, such as pricing, forecasting, demand planning, recruiting planning and budgeting, and talent management to get started. The goal is to understand the ease of use while accessing innovation at the edge. Teams should select integration tools that will enable hybrid models and long-term cloud-to-cloud orchestration.

Figure 8. A Post-Digital View of ERP Modernization



Source: Constellation Research

2. **Consider a two-tiered approach to cloud ERP.** Start an upgrade or replacement project inside a division, geographic region or separate business unit. Take the time to redesign processes for both efficiency and automation. Apply lessons learned from the upgrade or replacement experience to drive future adoption across the enterprise.

3. **Make the shift to pure cloud ERP.** Explore the requirements to move to a pure cloud ERP solution. Map previous customizations to new or promised functionality on the road map. Consider the impact of integrations. Design the system to address key business questions. Assess processes for automation capabilities. Design for digital feedback loops.

4. **Incorporate digital feedback loops.** Use each choice to create digital feedback loops that deliver insights. Insights power next best actions along the data-to-decision continuum. The creation of feedback loops mitigates risk, ensures compliance, optimizes operations, increases revenue, improves experience, informs product offerings and enables brand promise.

5. **Democratize decisions in the front office and the back office.** Employees throughout the enterprise can take action to improve customer experiences, but only if they have the right information

presented in context at the right moment. Renew existing transactional systems from ERP, customer relationship management and supply chain by abstracting the transactions and enabling orchestration of new experiences. Taking these new journeys to the front lines will enable the ability to democratize decisions across all stakeholders.

6. **Deliver mass personalization at scale with automation and AI.** As organizations light up their data-driven digital networks, organizations can finally deliver mass personalization at scale. Intelligent enterprises will use AI and machine learning tools to automate this personalization and build autonomous and self-learning systems over time.

When to Consider Oracle ERP Cloud

Based on conversations with over 200 Oracle ERP Cloud customers and partners and 200 large enterprise ERP prospects, organizations that meet the following requirements should consider this offering for their short list:

- Oracle "red stack" die-hard customers
- Midmarket to large enterprises seeking an international and global footprint
- Forward-thinking buyers seeking a future of autonomous and self-driving applications
- SAP customers seeking change and modernization in the cloud
- Workday prospects seeking greater end-to-end finance functionality
- Customers seeking strong planning and budgeting capabilities
- Services-centric ERP customers requiring sophisticated project management capability
- Product-centric ERP customers with a manufacturing bent
- Organizations wanting an option of deployment models to grow into over time from on-premises to cloud on the same code base

RELATED RESEARCH

R "Ray" Wang, "Constellation ShortList™ Enterprise Cloud Finance," Constellation Research, August 21, 2019.
https://www.constellationr.com/research/constellation-shortlist-enterprise-cloud-finance-5

R "Ray" Wang, "Innovations Abound in Global Cloud ERP Suites," Constellation Research, October 3, 2019.
https://www.constellationr.com/research/innovations-abound-global-cloud-erp-suites

R "Ray" Wang

Founder and Principal Analyst

R "Ray" Wang is Founder, Chairman and Principal Analyst of Constellation Research, Inc., and the author of the popular enterprise software blog, "A Software Insider's Point of View." He previously was a Founding Partner and Research Analyst for enterprise strategy at *Altimeter Group*.

A background in emerging business and technology trends, enterprise apps strategy, technology selection and contract negotiations enables Wang to provide clients and readers with the bridge between business leadership and technology adoption. Wang has been recognized by the prestigious Institute of Industry Analyst Relations (IIAR) as the Analyst of the Year, and in 2009, he was recognized as one of the most important analysts for Enterprise, SMB and Software. In 2010, Wang was recognized on the ARInsights Power 100 List of Industry Analysts and named one of the top Influential Leaders in the CRM Magazine 100 Market Awards.

Wang graduated from the Johns Hopkins University with a B.A. in natural sciences and public health. His graduate training includes a master's degree from the Johns Hopkins University in health policy and management and health finance and management.

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ABOUT CONSTELLATION RESEARCH

Constellation Research is an award-winning, Silicon Valley-based research and advisory firm that helps organizations navigate the challenges of digital disruption through business models transformation and the judicious application of disruptive technologies. Unlike the legacy analyst firms, Constellation Research is disrupting how research is accessed, what topics are covered and how clients can partner with a research firm to achieve success. Over 350 clients have joined from an ecosystem of buyers, partners, solution providers, C-suite, boards of directors and vendor clients. Our mission is to identify, validate and share insights with our clients.

Organizational Highlights

- Named Institute of Industry Analyst Relations (IIAR) New Analyst Firm of the Year in 2011 and #1 Independent Analyst Firm for 2014 and 2015.
- Experienced research team with an average of 25 years of practitioner, management and industry experience.
- Organizers of the Constellation Connected Enterprise—an innovation summit and best practices knowledge-sharing retreat for business leaders.
- Founders of Constellation Executive Network, a membership organization for digital leaders seeking to learn from market leaders and fast followers.

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