

The Next Generation of ERP

What's Right, What's Wrong and What's Changing

WHITE
PAPER



ERP



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A Note About This Research

February 2017

Ventana Research performed this research to determine attitudes toward and utilization of enterprise resource planning (ERP). This document is based on our research and analysis of information provided by organizations that we deemed qualified to participate in this benchmark research.

This research was designed to investigate ERP systems, practices, needs and potential benefits. It is not intended for use outside of this context and does not imply that organizations are guaranteed success by relying on these results to improve ERP. Moreover, gaining the most benefit from an ERP system requires an assessment of your organization's unique needs to identify gaps and priorities for improvement.

The full report with detailed analysis is available for purchase. We can provide detailed insights on this benchmark research and advice on its relevance through the Ventana On-Demand research and advisory service. Assessment Services based on this benchmark research also are available.

We certify that Ventana Research wrote and edited this report independently, that the analysis contained herein is a faithful representation of our evaluation based on our experience with and knowledge of enterprise resource planning, and that the analysis and conclusions are entirely our own.

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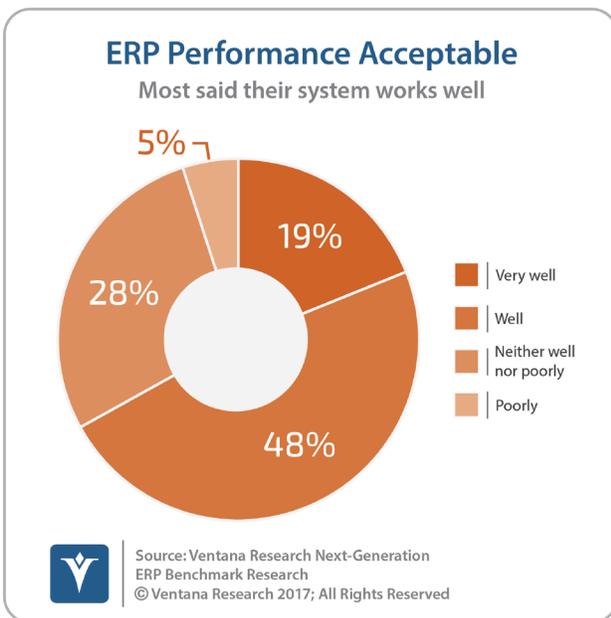
Executive Summary

The enterprise resource planning (ERP) system is a pillar of nearly every company’s record-keeping and management of business processes. It is essential to the smooth functioning of a business’s accounting and finance functions. In manufacturing and distribution, ERP also can manage inventory and logistics. Some companies use it to handle human resources functions like tracking employees, payroll and related costs.

Partly because of their centrality, ERP systems have been slow to evolve since they emerged in the 1990s. Now, however, ERP systems have begun to change, facilitated by the growing availability of new technologies including cloud computing, collaboration, mobility, analytics and planning, which have the potential to address shortcomings and the most common complaints in today’s systems.

The users of ERP systems are changing as well. The demographic shift taking place in the ranks of senior executives and managers, from the baby boom generation to those who grew up with computer technology, is creating demand for software that is both more capable and more usable. One of our objectives in this research was to gauge the appetite for a “better” ERP experience. Over the past decade there have been small but steady improvements in the design of systems and the underlying technologies. Now, as vendors are introducing more

significant changes, we wanted to assess the degree to which users are or are not satisfied and to get a sense of how motivated they will be to replace their existing systems with new ones.



As part of our analysis we compared the new research with the results of a study conducted in 2006. Naturally we find changes, but some reflect the slow development of this software category. For example, only one in five (19%) participants in this research said that their primary ERP system works very well, somewhat more than the 12 percent who said that a decade ago. Just 19 percent said working with it is as easy as one could expect, essentially unchanged

from the 20 percent recorded 10 years ago.

ERP systems are inherently complex. A small majority (54%) said that their system is easy enough to work with but probably could be improved. This response suggests stoicism in “making do” with what one has as well as hope for



something better. The research also shows that in selecting ERP software, the largest percentage (77%) cited usability as a very important criterion. We believe that making ERP easier to use can be a major factor in motivating organizations to adopt new systems, particularly in design of the user interface, which many vendors have been or will be revising. A related finding, that just 39 percent of research participants said it is easy or very easy to train users of their ERP system, emphasizes another aspect of the need for enhanced usability.

Of course, IT personnel are users, too, and here as well we uncovered issues. Only two-fifths (39%) of those participants said it is easy or very easy to implement updates and patches to their company's on-premises ERP system. Just 19 percent are able to implement changes to or update the system within one week when patches or bug fixes are released, and not many more (26%) can implement an update within a month of its release. Here also vendors have work to do.



Elsewhere the research finds signs of improvement over time. Regarding areas where the ERP system has had a measurable positive impact on their company's performance, 84 percent of participants said that it has enhanced internal control, significantly more than the 50 percent who said this previously. Similarly, 77 percent now credited their ERP software with improving operational efficiency, compared to 54 percent in 2006. Twice as many as a decade ago said that the system has improved employee productivity (62% vs. 31%).

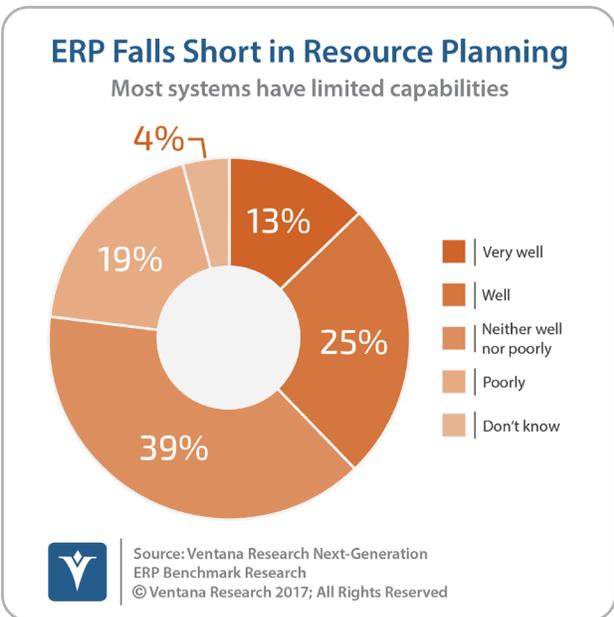
One likely reason for improved effectiveness is that more companies are keeping their ERP systems up-to-date. Nearly two-thirds (64%) said they have made a major change to their system within the last two years. Just 8 percent of those that implemented their system three or more years earlier have not made a major change. Upgrade frequency also probably plays a role in organizations keeping their ERP systems longer than in the past: They now are replacing these systems on average every seven years, compared to every 5.1 years a decade ago and 6.4 years in research we conducted in 2014.

Further analysis finds some significant functions in which current ERP systems fall short. Automating processes from end to end, for example, can ensure data quality, speed transactions that result in payments or discounts and enable people to work on other tasks who otherwise would be tied up. Yet the majority of organizations don't use ERP to facilitate automation of such processes: Only 30 percent fully automate their order-to-cash cycle in some or all of the company,



and just 23 percent fully automate the procure-to-pay cycle through their ERP system.

A similar situation exists in the limited use of ERP to manage planning for future resource and process needs.



A majority said that the system does it neither well nor poorly (39%) or poorly (19%). A considerable amount of enterprise planning that takes place in departments, such as sales forecasting and financial planning and budgeting, is performed largely in spreadsheets or another dedicated application from a third party. We see a need for enabling ERP systems to handle analytical tasks such as planning as well as transaction processing.

The research also finds organizations using separate applications for core processes that could be handled in a unified ERP suite of applications. In particular, three out of four (74%) have

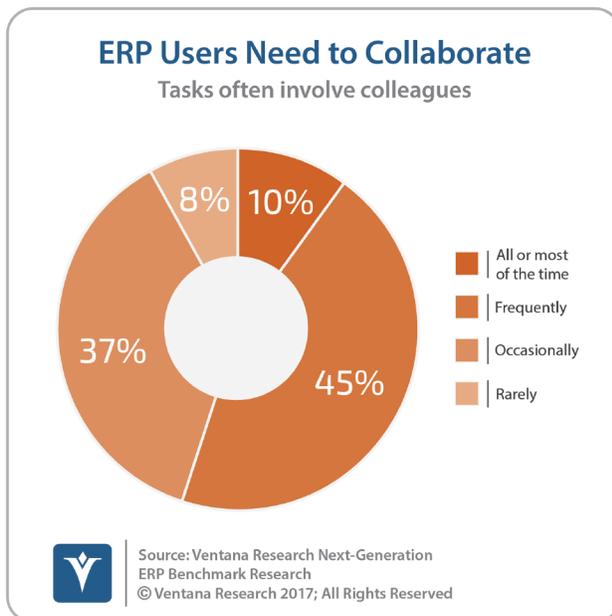
an HR application that comes from a vendor other than their ERP supplier. This is true also in the use of separate software for project management (57%), e-commerce (54%), maintenance, repair and overhaul (51%) and expense management (45%). Any of these systems often must share information with ERP, which risks inconsistency or incompleteness if managed manually. Yet only 37 percent of research participants with IT titles said it's easy or very easy to integrate their ERP software with other applications.

Along the same lines, slightly more than half (55%) of organizations said it is easy or very easy to get useful information from their ERP system; the rest have to go to at least some trouble to do that. More specifically, fewer than half (38%) said their system organizes information into built-in dashboards well or very well; the rest said not enough information is there (27%), little information is there (16%) or the system has no dashboards (20%). In the related area of reporting, almost the same percentage said that they are not satisfied with their ERP capabilities (24%) and as said they are satisfied (23%); half expressed relative indifference about these capabilities. While the research finds exporting information from ERP systems to be easier than it was a decade ago, it reveals that vendors still need to make it easier for users to pull information from their ERP system.



Challenges loom for ERP vendors not only in improving existing capabilities in their products but in responding to the dramatic technological breakthroughs of recent years. They directly impact the two software evaluation criteria most often called very important by research participants: usability (77%) and functionality (63%). Mobile capabilities touch both criteria, and the next generation of ERP must include them, as some already do. Two-thirds of organizations have mobile access to ERP information or plan to acquire it. But providing it should not be a just a

checklist obligation; vendors must make interacting with today's myriad types of mobile devices as easy and full-featured as possible. So far, only 30 percent of participants said that their system currently offers most or substantially all of the mobile capabilities they need.



A second key new technology is advanced collaboration. More than half (55%) of organizations said they need to collaborate with colleagues frequently or more often to accomplish tasks using the ERP system. Half (51%) said collaboration using ERP is easy enough but could be improved; more said it is not easy enough or difficult (31%) than said it is very easy (18%). The research also

shows that most users resort to the most conventional methods to communicate and interact: email, face-to-face conversations and telephone calls. More innovative methods such as instant messaging and video sharing exist today, but only small percentages of participants said they use them. Awareness as well as incorporated functionality likely will be needed to make in-context collaboration a viable tool for ERP users.

The third next-generation technology most relevant for this research is cloud computing, but its use for ERP runs into special circumstances. A major barrier to the adoption of cloud-based software for ERP is the issue of customization. More than one-fourth (28%) of organizations said that their ERP system required substantial customization, and nearly half (47%) indicated that theirs needed some customizing. In cloud-based, multitenant software as a service, all customers use the exact same code. Organizations can configure specific capabilities to their requirements, but they cannot customize the application itself to fit their needs. Vendors will have to find solutions that accommodate the need for specific capabilities while taking advantage of the efficiency and cost savings in areas that do not require it.

Enterprise resource planning is a bedrock technology for all but the smallest organizations in a variety of industries. The nature of business and services is changing, as are the expectations of customers and employees. Some ERP



vendors recognize the need to accelerate change in this slow-moving category. Others also must innovate or be left behind as a generation of applications draws closer to aging out of viability.



Key Insights

This benchmark research, in itself and compared with similar research we conducted in 2006, yielded a number of important general findings and key insights regarding the state of ERP systems. (We discuss performance levels in the Performance Index portion of the full research report; the actual questions asked in our survey are in an appendix to the research report. Specifics of organization sizes are in the appendix “About This Benchmark Research.”)

ERP contributes to productivity, but there’s room for performance improvement.

We asked participants whether use of their ERP system has had a measurable positive impact on their company’s performance in a range of areas. The results

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More than three-fourths (77%) of participants now credited their ERP software with improving operational efficiency.

show a significant increase over the previous research in affirmative answers in three key areas. The impact most often cited (by 84%) is that it has enhanced internal control; a decade ago 50 percent of participants cited this. It’s possible that the use of ERP systems to facilitate compliance with the Sarbanes-Oxley Act (just being rolled out a decade ago) is responsible for the improvement. More than three-fourths (77%) now credited their ERP software with improving operational efficiency, compared to 54 percent in 2006. Almost two-thirds (62%) said that the system has improved employee productivity, twice as many as a decade ago (31%). But in this new research, optimizing business processes – a main rationale for adopting ERP

software when it was introduced in the 1990s – was selected less frequently than the other measures. Half (51%) now said that it has improved performance in that area, not much more than the 40 percent in 2006.

Nonetheless, our Performance Index analysis of ERP reflects a perception of indifferent ERP performance today. The analysis places only 9 percent of participating organizations at the highest Innovative level of performance, two-fifths are at the lowest Tactical performance level. Two-thirds of organizations are in the lower half of the performance hierarchy. Among the four dimensions into which we segment performance, analysis finds notably the fewest (18%) organizations at the top two levels in the Technology dimension, indicating that current systems don’t do enough.

Users are only somewhat satisfied with ERP systems, but that may change.

User satisfaction with ERP systems has been and remains an issue. Only one in five (19%) participants in this current research said that their primary ERP system



works very well, although that is somewhat more than the 12 percent who said that a decade ago. Just 19 percent said working with it is as easy as one could expect, essentially unchanged from the 20 percent recorded 10 years ago.

We believe that organizations will be motivated to replace or upgrade their ERP systems when ERP software vendors can demonstrate convincingly that their software offers improved performance and is easier to use. We expect a vendor's ability to offer a better user experience will be a major factor driving its market share in coming years. Vendors are rethinking their user interface (UI) design and the user experience generally to eliminate unnecessary complexity and make the execution of tasks easier. The research finds a correlation between how effectively an ERP system is able to organize information into dashboards (which is a good proxy for the quality of UI design) and how easy it is for users to use dashboards to get needed information. The research found that usability is the most important technology and vendor consideration – 77 percent told us it is very important, while 63 percent cited functionality as very important. Vendors also are exploring how the use of artificial intelligence may enhance the efficiency and adaptability of their systems – steps that would increase user productivity.

Companies are replacing their ERP systems less frequently.

Companies are replacing their ERP systems less often, the research finds. They now are replacing these systems on average every seven years, compared to every 5.1 years a decade ago and 6.4 years in research we conducted in 2014. We attribute this to the limited changes that have occurred farther in the past in the technologies underlying ERP and perhaps also to findings in the research that



Nearly two-thirds of organizations said they have made a major change to their ERP system within the past two years.

organizations now are achieving better results from ERP systems. Another factor likely influencing longevity is that more companies are keeping their systems up-to-date. Nearly two-thirds said they have made a major change to their system within the past two years: 29 percent within the last 12 months and 35 percent within one to two years. Just 8 percent of those that implemented their system three or more years earlier have never made a major change. We expect the pace of change in ERP software to accelerate over the next five years. Whether that will lead to a faster replacement cycle, however, will depend on how those changes are put in place. Enhancements that

require only an upgrade as opposed to a major overhaul probably will be adopted sooner. Vendors that are able to provide easily implemented sets of improvements or migrations in the coming years will be likely to retain customers longer than those that fail to do so.



ERP systems are not utilized effectively for process automation or planning.

End-to-end process automation is useful in getting work completed in a timely fashion and in helping an organization get paid sooner or gain early pay discounts more frequently. It also ensures that the data created and used in that process is passed from step to step without human intervention. Automation thus is a way of ensuring data quality from beginning to end. However, despite this value, the research finds that fewer than one-third (30%) of companies have used their ERP system to fully automate their order-to-cash cycle in some or all of the company. Another 23 percent have automated most of the cycle in some or all of the company. For the procure-to-pay cycle in its various forms just 23 percent said that their process is fully automated through their ERP system in some or all of the company.



The majority of organizations have not used ERP to facilitate the automation of business processes.

Another one-third (32%) said most of the process is automated in some or all of the company. The majority of organizations have not used ERP to facilitate the automation of business processes.

We asked participants to what degree their ERP system supports their efforts to manage planning for future resource and process needs. Only 13 percent said that their system does this very well, and another 25 percent said it does it well. A majority said that it does it neither well nor poorly (39%) or poorly (19%). Inventory planning, an area that ERP systems typically have focused on, is

a business process that is necessary but usually insufficient by itself. Even companies that deal in products or distribution need demand planning and supplier management integrated in the system as well. And a considerable amount of enterprise planning that takes place in a range of departments, such as sales forecasting and financial planning and budgeting, is performed largely in spreadsheets or another dedicated application from a third party. In fact, spreadsheets are used all the time in close to half (47%) of organizations and frequently in 42 percent. One technology trend already under way is enabling ERP systems to handle analytical tasks such as planning as well as their core purpose of transaction processing. We expect vendors to add more depth and integration in planning to their ERP offerings.

It's not easy to get organized information out of ERP systems.

ERP was revolutionary a quarter of a century ago because it centralized the process of collecting enterprise information that previously required juggling an array of incompatible systems. However, ERP software quickly acquired a reputation for difficulty in retrieving usable information from it. To overcome this issue companies deployed business intelligence software and created separate data stores. We find that this is still the case: 73 percent of companies in the research that have 1,000 or more employees have a dedicated centralized data warehouse for their financial information.



Recently, ERP vendors have been adding dashboards and other forms of organized communications to their offerings to make information and insights from the system's data more readily available from within the application. Nonetheless, companies told us in this research that they find it difficult to get organized information out of their ERP application. Only 12 percent said that their ERP system organizes information they need very well into built-in dashboards, giving them all the information they need, while another 26 percent stated that they get most of



Only 12 percent said that their ERP system organizes information they need very well into built-in dashboards.

that information. One-fourth (27%) assessed the ERP system's ability to organize information as adequate, 16 percent said it is poor, and one-fifth said their application lacks dashboards entirely. Our findings were similar with respect to reporting: Fewer than one-quarter (23%) of participants reported being satisfied and almost one-third (32%) are somewhat satisfied. While the research finds exporting information from ERP systems to be easier than it was a decade ago, it suggests that vendors still need to make it easier for users to configure dashboards and other reporting capabilities to pull information from their ERP system.

Neither unified ERP suites nor best-of-breed applications dominate.

The debate over whether it's better to have a unified ERP suite that incorporates a full range of functionality or individual applications that are best suited to the needs of a department has been raging since the first ERP suites were introduced. The current research finds that few companies are dogmatic on this point: Only a handful (3%) said they insist on a taking a full suite approach, and just 5 percent said they always insist on individual best-of-breed applications. On balance, more participants lean toward a suite approach: 41 percent said they prefer a suite unless there is specific functionality they need, while 30 percent prefer individual applications unless the suite addresses their needs. One in five indicated no preference. Vendors have spent decades broadening the functionality of their ERP suites and adding industry-specific capabilities and features to make their software part of a complete solution. They market the breadth and depth of their suites as superior to best-of-breed. The research results indicate that users aren't convinced either way on this point.

Organizations are using separate applications in parallel with ERP.

Despite a plurality of participants stating a preference for ERP suites, the research shows that companies have separate applications for four frequently used software categories. Three out of four (74%) have an HR application from a different vendor. About half use separate software for project management (57%), e-commerce (54%) and maintenance, repair and overhaul (51%). In addition, just under half (45%) use a distinct expense management application.



We conclude that organizations take a pragmatic approach to software selection, using separate applications where the desired functionality is not readily available in ERP.

New ERP systems should incorporate mobility and in-context collaboration.

Mobile enablement is already an important capability of some modern ERP systems. The research finds that one-third (35%) of companies use it while another one-third don't have it yet but plan to acquire it. Mobile capabilities are essential in today's business world because so many people spend time away from their desks. Executives need to access information, managers may need to handle approvals while on the factory floor to prevent delays in processes, and sales people may need to check inventories. Simply having mobile capabilities is not enough, though; vendors must make interacting with today's myriad types of mobile devices as easy and full-featured as possible. So far, only 30 percent of participants said that their system currently offers most or substantially all of the mobile capabilities they need.

Collaboration is another key requirement for the next generation of ERP systems.



More than half (55%) said that they need to collaborate with colleagues in ERP processes all the time or frequently.

More than half (55%) of research participants said that they need to collaborate with colleagues in ERP processes all the time or frequently, while only 8 percent said they rarely need to do that. Collaborative software that understands the context of the work performed and automates the process of managing the who, what and when of communications supports effective collaboration, fast completion of tasks, situational awareness within the organization and as a result better decision-making.

However, while some ERP vendors have introduced improved methods for collaborating with colleagues within their system, the research shows limited adoption of these methods. This likely is because they are relatively new and not standard in ERP systems. Half of participants said they use email as their main collaboration method, 29 percent mostly have face-to-face conversations, and 9 percent use the telephone. Only 18 percent of participants said they find it very easy to collaborate with colleagues, while nearly one-third (31%) said that it's difficult or not easy enough. Because it's easier to use and offers multiple benefits, we view in-context collaboration as an essential capability of modern ERP systems.

The need for customization of ERP challenges cloud computing.

More than one-fourth (28%) of organizations said that their ERP system required substantial customization, and nearly half (47%) indicated that theirs needed some



customizing. Only one-fourth (24%) said it needed little or none. Integrating other applications with ERP to provide needed functionality is easy or very easy for 37 percent of the respondents, but 23 percent said it is difficult; 37 percent said it's neither difficult nor easy.



The need for customization is a major barrier to the adoption of cloud computing for ERP.

That a majority of companies require at least some customization suggests this is a major barrier to the adoption of cloud computing for ERP. In cloud-based, multitenant software as a service, all customers use the exact same code. Organizations can configure specific capabilities to their requirements, but they cannot customize the application itself to fit their needs. Vendors are addressing this issue in several ways. One is by allowing for configurability of the application, decoupling elements of the software so organizations can configure the ERP system to operate in the cloud the parts that require no customization while developing other parts in the

vendor's cloud or on-premises. Utilizing the vendor's cloud-based platform as a service (PaaS) can significantly assist in the overall migration of ERP wholly or largely to the cloud.

Integrating ERP is a challenge for business and IT.

A majority of participants in this research with IT titles said they do not find it easy to maintain their company's on-premises ERP system. Likewise, only 37 percent said it's easy or very easy to integrate their ERP software with other applications, and 39 percent said that it is easy or very easy to implement updates and patches. Just 19 percent are able to implement changes to or update the system within one week when patches or bug fixes are released, and only one-fourth (26%) can implement an update within a month of its release. In this respect, switching from on-premises to a cloud-based deployment will require integration technology that can help interconnect cloud computing and on-premises ERP applications at the process, application and data levels.



10 Best Practice Recommendations

This benchmark research reveals significant new insights into the evolving nature and use of enterprise resource management systems. We offer the following recommendations for managing the life cycle of ERP systems.

1. Establish a cross-functional ERP steering committee to evaluate change.

The findings of this benchmark research suggest that because making changes to ERP systems isn't easy, companies are reluctant to do other than routine maintenance once the software is implemented. Yet, driven by technology advances, ERP systems' capabilities will evolve much more rapidly over the next five years than in the past 20. Knowing how and when to make changes will enable a company to gain operational efficiencies and competitive advantages. Many important changes to a company's existing ERP systems will be available as version upgrades rather than replacements. A committee charged with monitoring responsibility can provide ongoing recommendations on how new features and capabilities can be applied to improve the organization's performance.

2. Use the standing committee to guide a better selection process.

Only one in five (19%) participants in this research said that their primary ERP system works very well, and the same small percentage said working with it is as easy as one could expect. As a rule, staying on top of what's available in any market leads to better-informed buying decisions. Over the decades we've observed that organizations retire their main ERP system only when replacing it has become a critical necessity. In the rush to replace what it has, a company will tend to focus its selection consideration using its existing processes, roles and practices as the baseline for determining its requirements. This amounts to "paving the cow path" rather than using the change opportunity to achieve a higher level of performance. Examining evaluation criteria including usability, manageability and reliability can be just as important as the functionality itself. A company will compound the problem if it takes an ad hoc approach to fixing the flaws found in a legacy system rather than addressing underlying structural issues or not understanding how to apply a more holistic solution. A committee charged with ongoing analysis of where emerging ERP capabilities intersect with the organization's strategic needs and opportunities can help optimize the outcomes of changes.

3. Before retiring an ERP system, understand the possibilities of a new one.

Having a standing committee that stays current on ERP technology is necessary to avoid investing in obsolescence. Organizations are keeping their ERP systems longer than they used to (on average eight years - a year and a half



more than the average 10 years ago). Consequently, they may not be aware of what ERP systems can now deliver. Not every company will take the approach of having a standing ERP steering committee. Those that don't should begin their selection process by creating a cross-functional selection committee. That committee's mandate must begin with understanding what modern ERP systems can deliver; it should use this as the context for defining the business objectives of the new system. These objectives then should be considered by the organization's senior executives, whose job is to sharpen those objectives in light of the strategic and tactical business issues the company needs to address to be successful.

4. An ERP steering committee must be cross-functional.

Relying on the IT department to stay abreast of ERP technology is necessary but insufficient. Typically, IT departments do not have deep understanding of the interplay between the functions of technology and the business and financial processes that the technology supports. That the committee have members from multiple non-IT functions is necessary because ERP systems affect a broad set of departments and each needs to have its requirements understood in the selection process to achieve the best results.

5. Expand and extend the use of end-to-end process automation.

Automating processes continuously from beginning to end – for example, from receipt of a sales order through collecting payment – saves time. Maintaining data integrity throughout a process saves even more time by eliminating the need for checks and reconciliations to ensure accuracy. Data integrity is achieved by ensuring that there is only one authoritative source of data and that all calculations are controlled and performed programmatically. ERP systems are designed to facilitate end-to-end process management. Yet only about one-third of the participants in this research use their ERP system to fully automate the key functions of order-to-cash and procure-to-pay. Understand the capabilities of your ERP system and deploy them as fully as possible to gain performance benefits.

6. Evaluate how easily your system makes information available to users.

Only slightly more than half (55%) of organizations said it is easy or very easy to get useful information from their ERP system. How does yours measure up in this regard? Does it provide built-in dashboards and -populate them with all the information users need? Also, how easy is it to use and how complete are the system's reporting capabilities?; fewer than one in four organizations are satisfied with theirs. Don't continue with a product that frustrates users and wastes their time in doing their jobs but may provide inaccurate or incomplete information to decision-makers.



7. Find technology to integrate ERP efficiently.

A majority of participants with IT titles said it isn't easy to maintain their company's on-premises ERP system. Likewise only 37 percent said it's easy or very easy to integrate their ERP software with other applications. Ask IT about issues in implementing software updates and patches and their effectiveness once it is done. Also determine how many separate applications require integration with ERP and how often. Identify problems that arise from these efforts and ensure that you know as much as possible about how to overcome them.

8. Make mobility part of your ERP strategy.

Mobile technology is ubiquitous in today's organizations, extending information access beyond the office walls. Some modern ERP systems now offer it; already one-third of research participants have mobile access, and that many more plan to acquire it. Investigate how to add mobility, making sure that potential vendors provide more than basic support. Only 30 percent of participants said that their ERP system currently offers most or nearly all of the mobile capabilities they need, so examine suppliers' roadmaps for adding features and supporting various platforms with easy-to-use apps.

9. Facilitate in-context collaboration for ERP users.

More than half (55%) of research participants said that they need to collaborate with colleagues in ERP processes all the time or frequently. However, more said it's difficult or not easy enough to collaborate than said it is very easy. Collaborative software designed to fit into the context of the work performed and that automates communications ultimately supports better decision-making, so look for advanced features in systems you evaluate. Going beyond the conventional collaboration channels of email, face-to-face conversations and the telephone could give your users an edge in their work and your organization a competitive advantage.

10. Assess whether it's feasible to put ERP in the cloud.

Cloud computing is widely used for a variety of business processes that lie outside most organizations' core competencies, but ERP typically is not one of these. Nevertheless, the advantages the cloud confers in reducing startup and recurring costs and simplifying implementation and maintenance are leading more companies to consider this option. Be aware, however, that three out of four organizations in this research said their ERP system required some or substantial customization; in a multitenant software-as-a-service deployment, users cannot customize the application itself to fit their needs. Armed with understanding of your specific needs, question cloud vendors on how they can provide them.



About Ventana Research

Ventana Research is the most authoritative and respected benchmark business technology research and advisory services firm. We provide insight and expert guidance on mainstream and disruptive technologies through a unique set of research-based offerings including benchmark research and technology evaluation assessments, education workshops and our research and advisory services, Ventana On-Demand. Our unparalleled understanding of the role of technology in optimizing business processes and performance and our best practices guidance are rooted in our rigorous research-based benchmarking of people, processes, information and technology across business and IT functions in every industry. This benchmark research plus our market coverage and in-depth knowledge of hundreds of technology providers means we can deliver education and expertise to our clients to increase the value they derive from technology investments while reducing time, cost and risk.

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Appendix: About This Benchmark Research

Methodology

Ventana Research conducted this benchmark research on the Web from March through August 2016. We solicited survey participation via email, our website and social media invitations. Email invitations were also sent by our media partners and by vendor sponsors.

We presented this explanation of the topic to participants prior to their entry into the survey:

Business applications are changing. In particular, software vendors are seeking to make them easier to use and more productive. We'd like to have your perspective on the state of your company's ERP system. ERP software handles a diverse set of tasks including statutory and management accounting, human resources management, inventory management, sales order management, fixed asset management and logistics management. These systems have been around for so long and are so much a part of people's jobs that they can fade into the background – until something goes wrong. Ventana Research is investigating how companies use their ERP systems, as well as their likes and dislikes. Your input will help guide the design of future ERP software.

The following promotion incented participants to complete the survey:

What's In It For You? Upon completion of the research, all qualified participants will receive a report on the findings of this benchmark research to support their organization's efforts, along with a \$25 Amazon.com gift certificate. In addition, all qualified participants will be entered into a drawing to win one of 25 benchmark research reports and a 30-minute consultation, a package valued at US\$1,495 or €1,232. Thank you for your participation!

Qualification

We designed the research to assess the use of and plans for spreadsheets across organizations and industries. Qualification to participate was presented to participants as follows:

The survey for this benchmark research is designed for managers or executives using any part of their company's ERP system as well as those responsible for managing it or its administration. This includes those with responsibilities in finance and accounting, HR, operations, sales and IT as well as those in senior executive roles. Solution providers, software vendors, consultants, media and systems integrators may participate in the survey, but they are not eligible for incentives and their input will be used only if they meet the qualifications. Incentives are provided to qualified participants in the research and also are



conditional on provision of accurate contact information including company name and company email address that can be used for fulfillment of incentives.

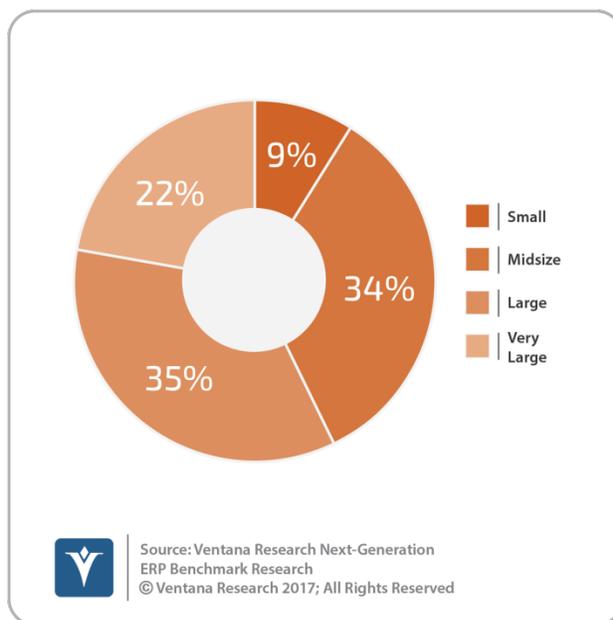
Further qualification evaluation of respondents was conducted as part of the research methodology and quality assurance processes. It entailed screening out responses from companies that are too small, questionnaires that were not materially complete, or those where the submission is from an inappropriate submitter or appears to be spurious.

Demographics

We designed the survey used for this research to be answered by executives and managers across a broad range of roles and titles working in organizations. We deemed 109 of those who clicked through to this survey to be qualified to have their answers analyzed in this research. In this report, the term “participants” refers to that group, and the charts in this section characterize various aspects of their demographics and qualifications.

Company Size by Workforce

We require participants to indicate the size of their entire company. Our research repeatedly shows that size of organization, measured in this instance by

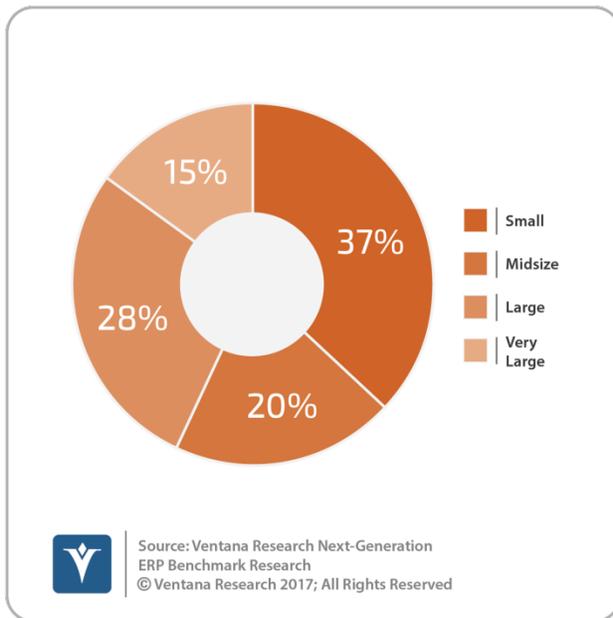


employees, is a useful means of segmenting companies because it correlates with the complexity of processes, communications and organizational structure as well as the complexity of the IT infrastructure. In this research, participants represented a broad range of organization sizes: 22 percent work in very large companies (having 10,000 or more employees), 35 percent work in large companies (with 1,000 to 9,999 employees), 34 percent work in midsize companies (with 100 to 999 employees), and 9 percent work in small companies (with fewer than 100 employees). This distribution is consistent with prior benchmark research and our research objectives

and provides a suitably large sample from each size category.

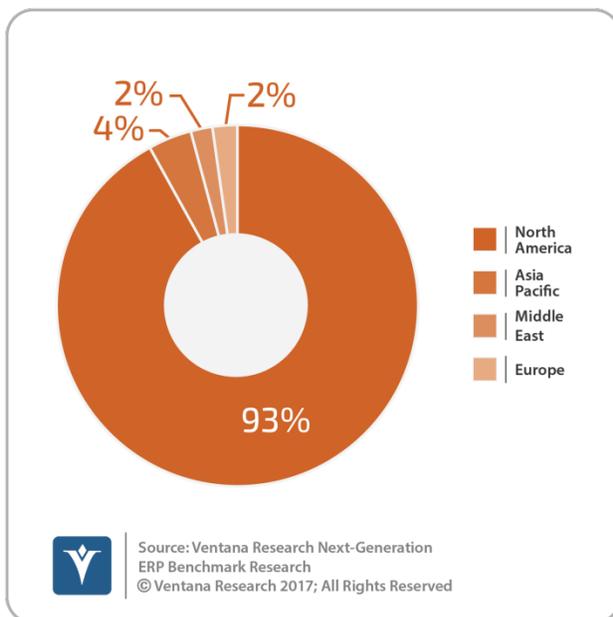


Company Size by Annual Revenue



When we measured size by annual revenue, the distribution of categories shifted downward; fewer companies fell into the three largest categories and four times as many are small. By this measure, 7 percent fewer are very large companies (having revenue of more than US\$10 billion), 7 percent fewer are large companies (having revenue from US\$500 million to US\$10 billion), 14 percent fewer are midsize companies (having revenue from US\$100 to US\$500 million), and 28 percent more are small companies (with revenue of less than US\$100 million). This sort of redistribution is typical in our research projects when we measure by revenue instead of head count.

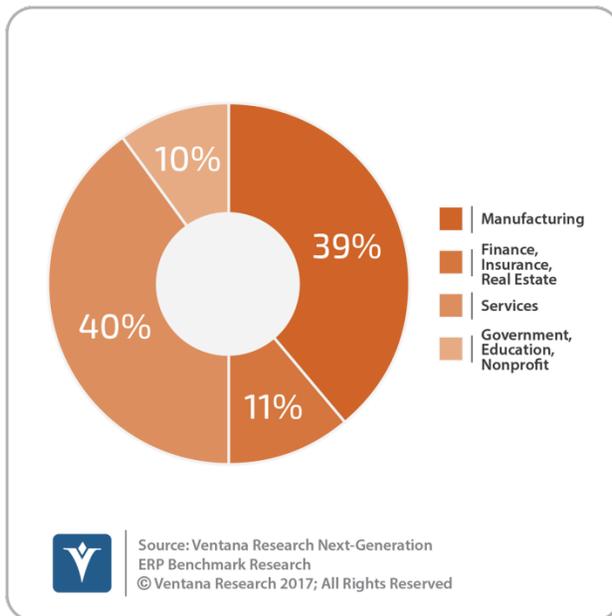
Geographic Distribution



A large majority (93%) of the participants were from companies located or headquartered in North America. Those based in Asia Pacific accounted for 4 percent and those in Europe and the Middle East for 2 percent each. This result was in keeping with our expectations at the start of this investigation, since organizations participating in our research most often are headquartered in North America. However, many of these are global organizations operating worldwide.

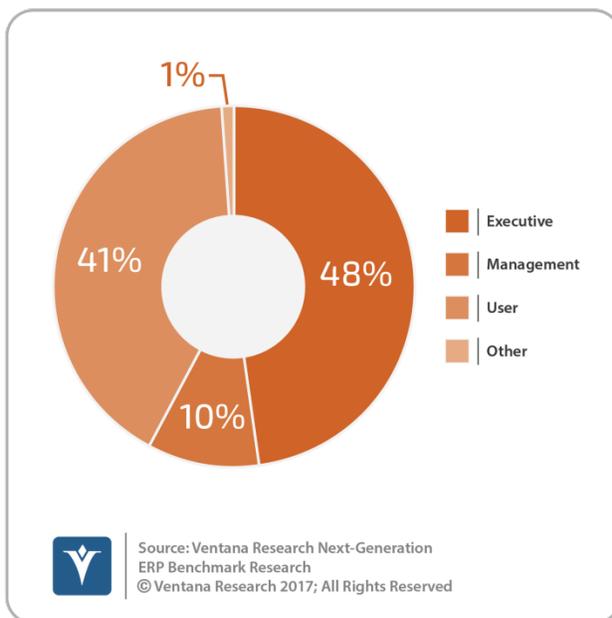


Industry



The companies of the participants in this benchmark research represented a broad range of industries, which we have categorized into four general categories as shown below. Companies that provide services (40%) and those in manufacturing (39%) accounted for more than three-fourths of the total. Those in finance, insurance and real estate accounted for 11 percent, and government, education and nonprofits accounted for the remaining 10 percent.

Job Title

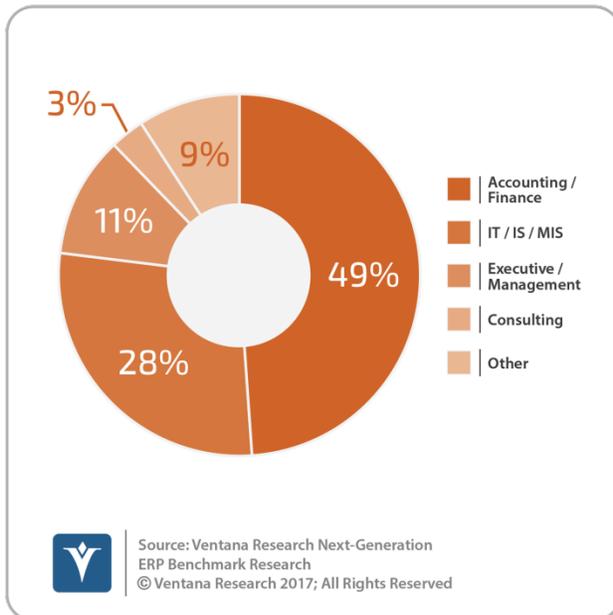


We asked participants to choose from among 13 titles the one that best describes theirs. We sorted these responses into four categories: executives, management, users and others. The largest group (48%) identified themselves as executives; half of them (24%) are CFOs or heads of Finance. Two-fifths of participants identified themselves as having titles that we categorize as users, a grouping that includes director (16%), senior manager or manager (12%), analyst (13%) and staff (1%). One in 10 are management, by which we mean vice presidents. Miscellaneous others accounted for the balance. We concluded

after analysis that this response set provided a meaningfully broad distribution of job titles.



Role by Functional Area



We asked participants to identify their functional area of responsibility as well. This enabled us to identify differences between participants who have differing roles in the organization. Nearly half of the participants identified themselves as being in the finance or accounting function. More than one-fourth work in IT, and 11 percent are executives or management. Another eight titles, none with more than 2 percent of the total, comprised the Other category.