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2018
ERP REPORT

CONTENTS

RESPONDENT OVERVIEW

Through research and rigorous quality assurance, we discounted certain feedback based on the following (valid responses totaled 237):

Duplicate responses were filtered out using the following criteria:

1. Duplicate/Similar IP's
2. Same Location
3. Email Matches (same e-mail addresses used multiple times)
4. Pasted/Unusual Responses
5. Submissions Completed in Under Two Minutes
6. Projects Costing Less Than $100,000

RESPONDENT DEMOGRAPHIC:

NORTH AMERICA // 91%

EUROPE// 7%

ASIA // 2%

INDUSTRY

This year's respondents largely represented organizations within the manufacturing vertical space. Historically, Panorama has seen a sizable percentage of survey responses coming from manufacturing, education and distribution companies. This year we have seen a growing number of organizations in the professional services and public sectors implementing end-to-end management solutions. This shouldn't come as a surprise, since ERP systems were first tailored to fit companies manufacturing and supply chain processes. As software vendors have started to transition into offering more SaaS or best-of-breed applications within their core packages, the ability to support other organizations with more niche best practices, is becoming commonplace.

INDUSTRY

Telecommunications , 2%

Construction, 3%

Healthcare, 3%

Education, 3%

Other, 3%

Non-Profit, 5%

Professional Services, 6%

Information Technology, 10%

Finance, Insurance & Realty, 11%
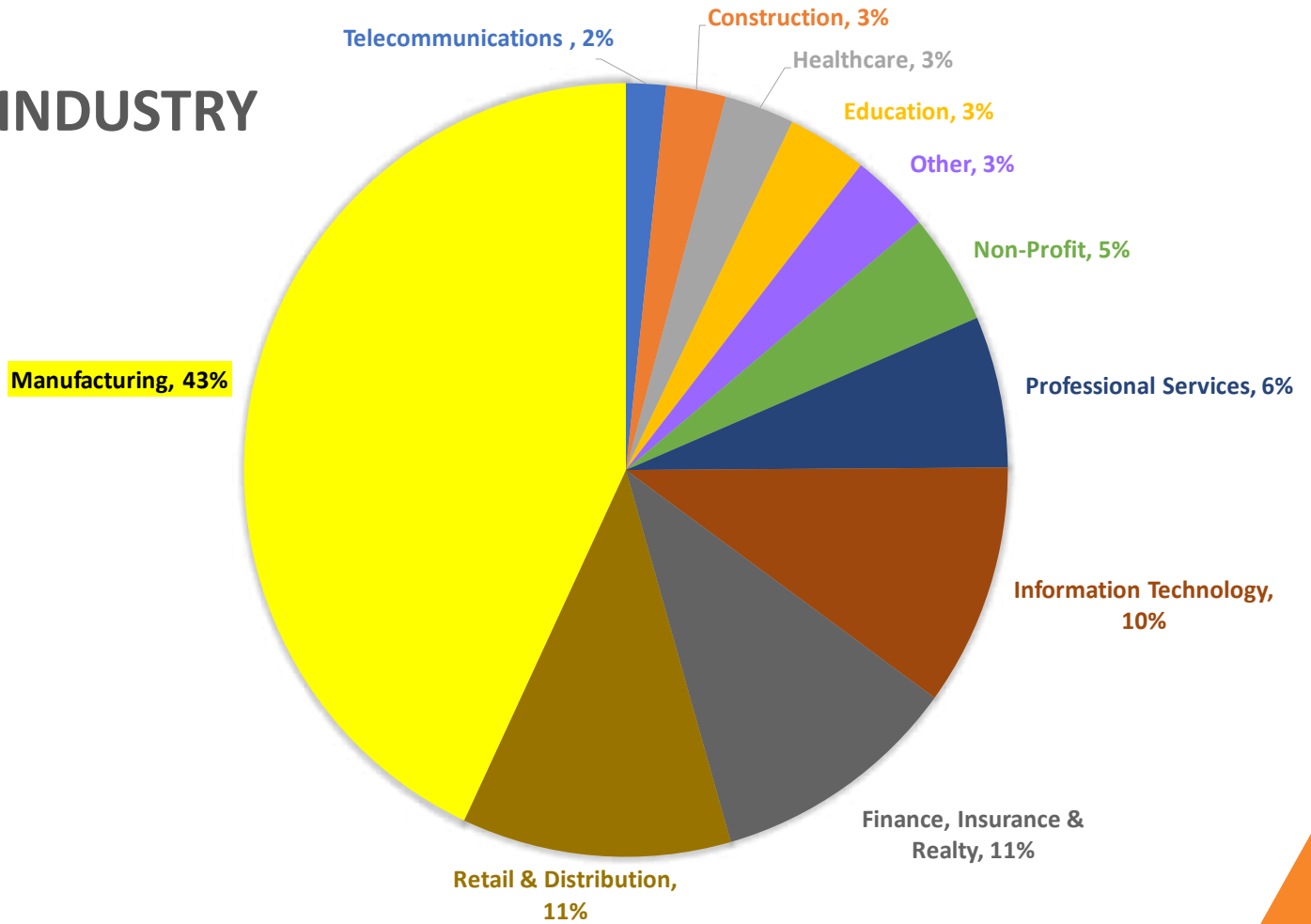
Retail & Distribution, 11%

Manufacturing, 43%

THIS YEAR WE HAD MORE SURVEY PARTICIPATION FROM MANUFACTURING, RETAIL AND DISTRIBUTION

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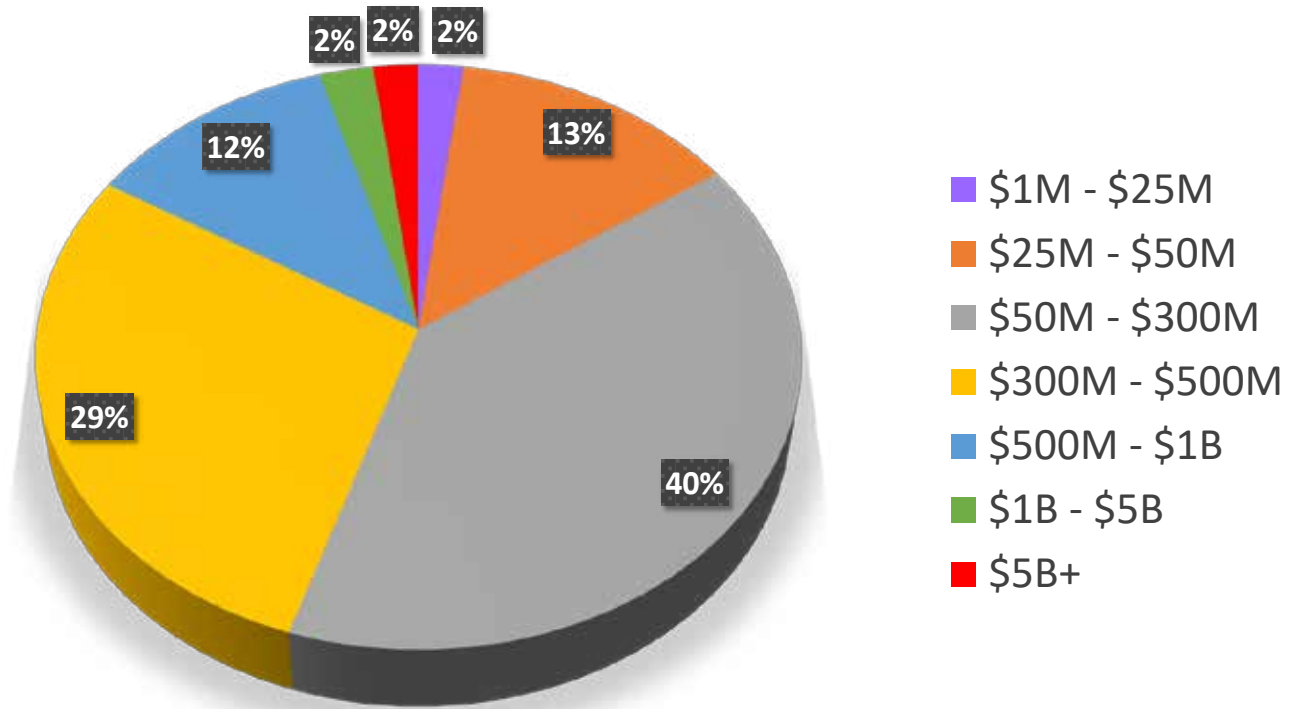CONSULTING SOLUTIONS

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AVERAGE ANNUAL
REVENUE OF REPORTING ORGANIZATIONS

Respondent organizations represent a wide range of company sizes. The majority of organizations reported between $50M - $300M in total annual revenue. With such a wide range in the average organization implementing an ERP solution, the important takeaway is to understand what makes a small/medium size firm want to embark on an ERP initiative. Companies of varied sizes approach ERP implementations differently in order to improve or solve a range issues. Indeed, the business case and expected benefits realized can differ by company size. For example, larger companies tend to take a more strategic approach and seek more robust solutions continuing to scale as their businesses grow. Whereas, smaller companies are often more tactical and typically look for improved performance around their core processes, such as in production and supply chain.

Total Annual Revenue (U.S. Dollars)

- 2%
- 2%
- 2%
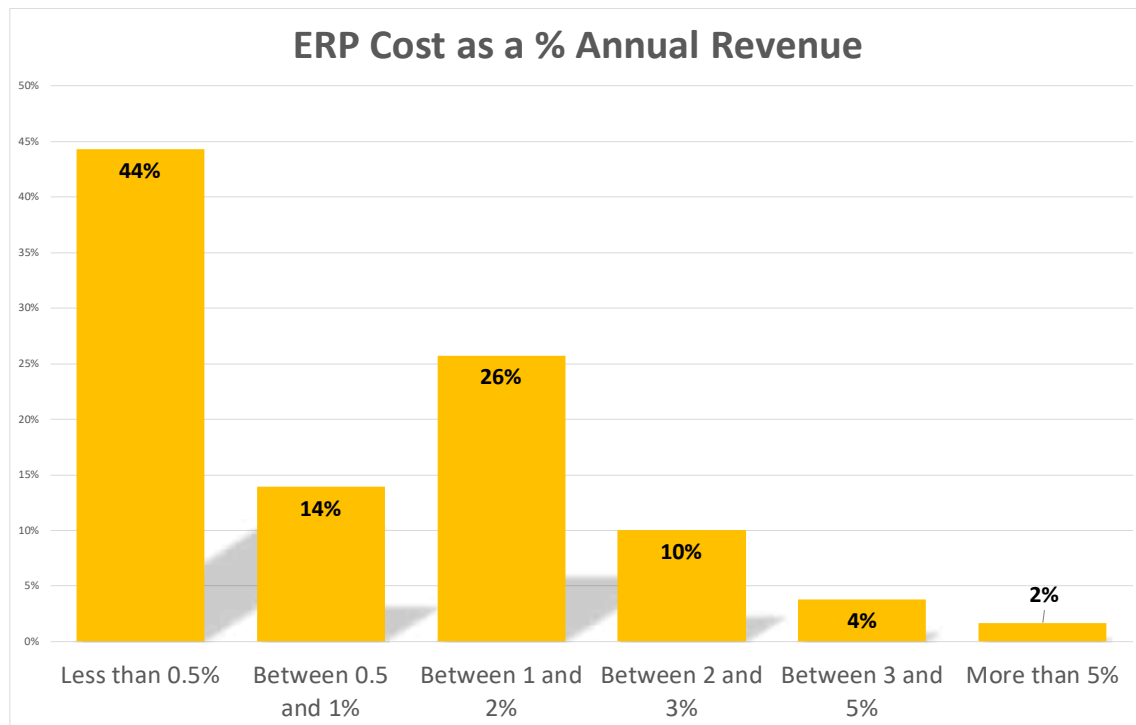- 12%
- 13%
- 29%
- 40%

Legend:
- ■ $1M - $25M
- ■ $25M - $50M
- ■ $50M - $300M
- ■ $300M - $500M
- ■ $500M - $1B
- ■ $1B - $5B
- ■ $5B+

THE AVERAGE ANNUAL REVENUE OF REPORTING ORGANIZATIONS WAS $439 MILLION.

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ERP COST AS A PERCENTAGE OF ANNUAL REVENUE

ERP Cost as a % Annual Revenue

- Less than 0.5%: 44%
- Between 0.5 and 1%: 14%
- Between 1 and 2%: 26%
- Between 2 and 3%: 10%
- Between 3 and 5%: 4%
- More than 5%: 2%

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The above graph represents what respondents reported they spent of their annual income. 84% of respondents had an expected or actual spend on ERP of less than two percent of annual income. However, it is important to note that these numbers are affected and differ by the size of an organization, in this case, it was gauged by annual revenue. Our data shows smaller companies are on the higher end of this two percent metric. It is not uncommon for the total cost of the project to exceed four percent of annual revenue depending on the type of ERP implementation, attention to Business Process Management (BPM) and Organizational Change Management (OCM). When budgeting for an ERP implementation, it is important to consider all costs, not just the licenses and services. Also consider internal costs, such as the percentage of time your own employees will need to spend on the project, along with the backfilling of any positions.

RESPONDENT VENDOR SELECTIONS

SELECTED ERP

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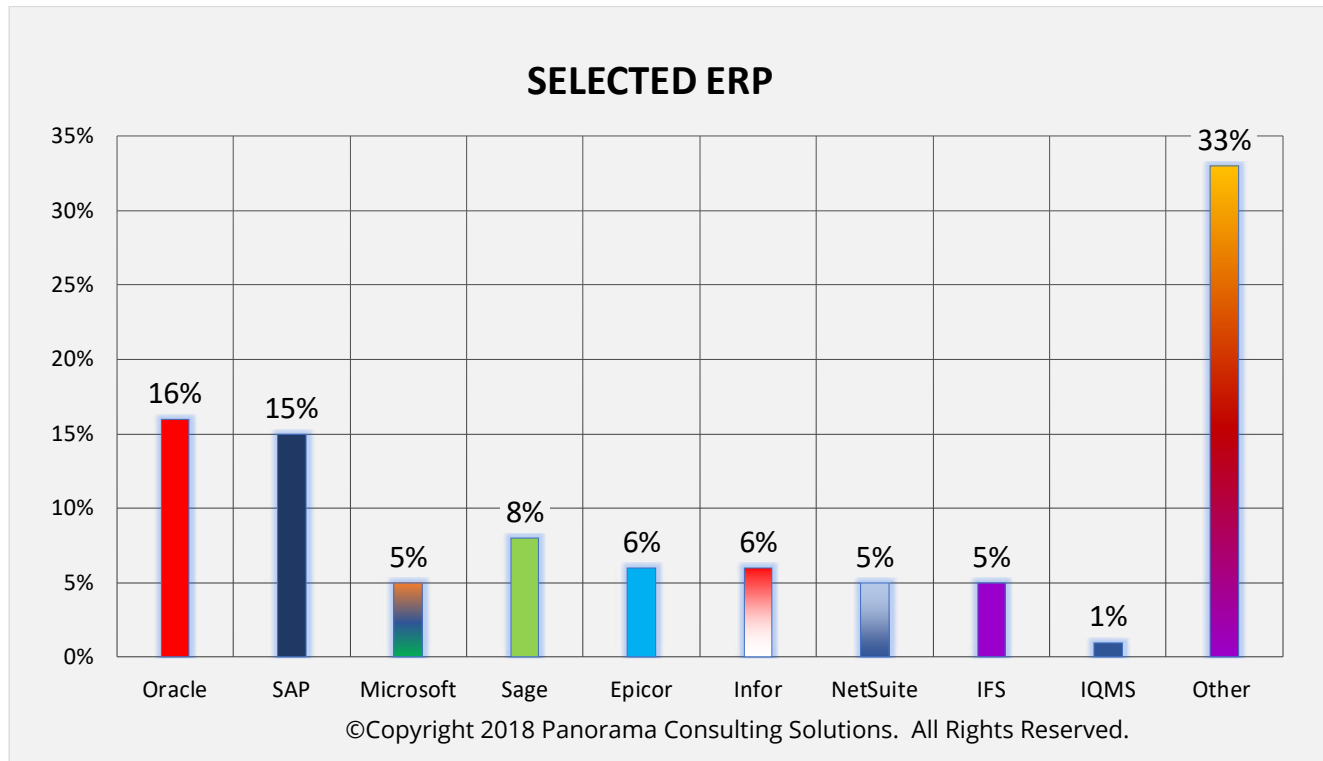
Oracle, SAP and Sage represented some of the most frequently selected ERP vendors among our respondents. With such a diverse range of industries represented in our respondents, this data does not provide much insight, aside from an indication there isn't much bias toward any particular vendor.

At Panorama we are vendor agnostic in our selection projects; this is important because one vendor does not fit all organizations. 42% of respondents selected a Tier I vendor for their implementation. The larger Tier I vendors tend to support a diverse array of functionality and may often cost more. Tier II vendors offer software packages that are mid-ranged in terms of complexity and size. Panorama focuses on functional and technical fit to ensure the solution is well aligned with current and future business objectives.

DEPLOYMENT OPTIONS

One of the main reasons an organization may select a SaaS model is lower entry cost, especially in a growing business. The bigger ERP vendors might not be viable as an on-prem model and may be more likely to contend when the SaaS pricing model fits.
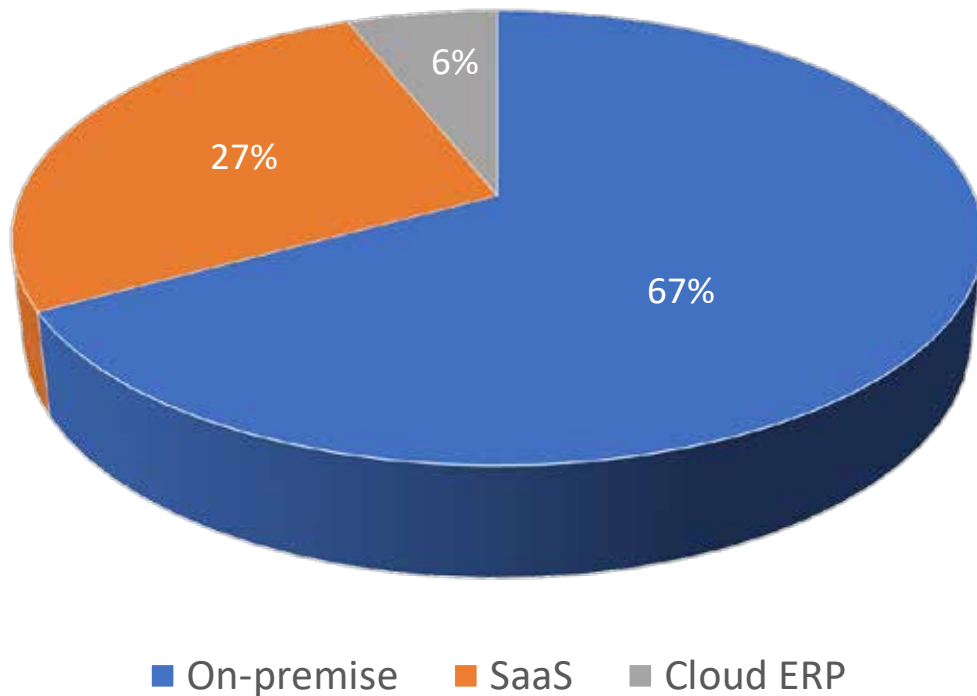
This year we saw a major uptick in the number of respondents who selected SaaS, with an increase of 37 percentage points resulting in implementations of cloud/SaaS having prominence the first time in our ERP report. This should come as no surprise as ERP vendors are heavily pushing their customers to the cloud. They are continuously building out their service platform and infrastructure to host solutions at both the business and enterprise levels. With options to digitize the customer experience, workforce engagement, supplier management and the movement to support IoT enablement, more and more companies are entrusting software providers and leveraging services which would typically be utilized in-house. While larger organizations may still have concerns being the early adopters to solutions that may not be as fully baked as their on-premise competitors, vendors have been reactive and adjusting for more price competitive implementation quotes.

2018 | Type of ERP Software

On-premise 15%
SaaS 64%
Cloud ERP 21%

■ On-premise   ■ SaaS   ■ Cloud ERP
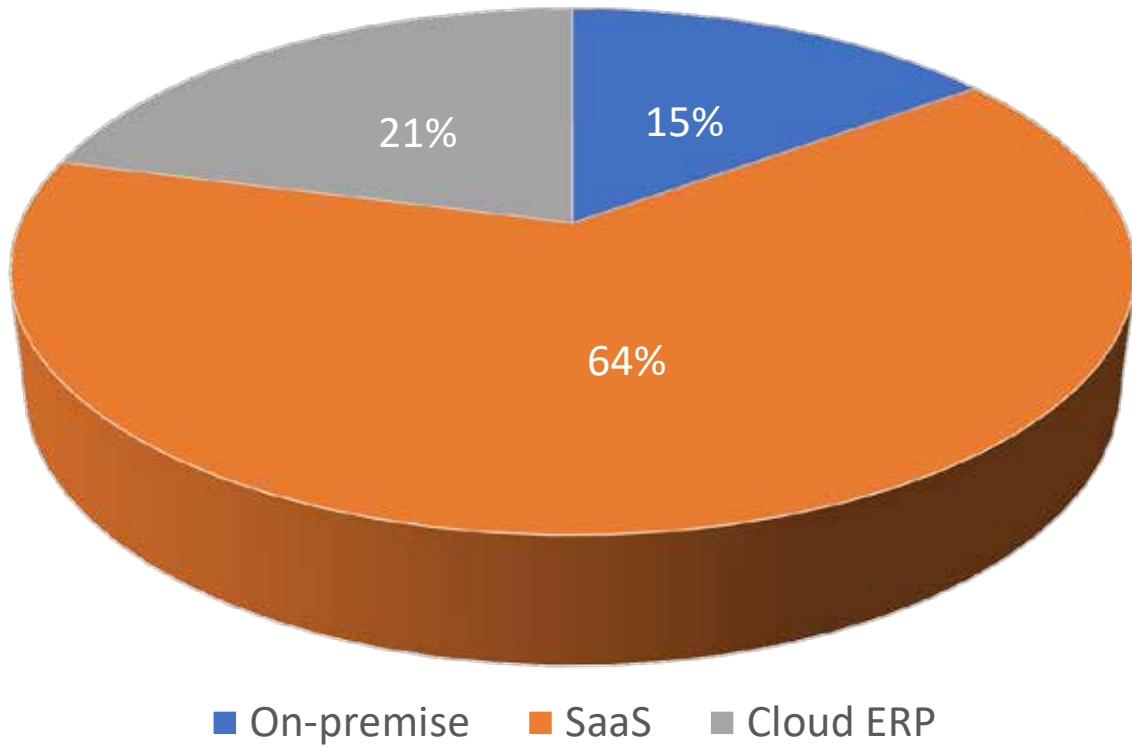
2017 | Type of ERP Software

On-premise 67%
SaaS 27%
Cloud ERP 6%

■ On-premise   ■ SaaS   ■ Cloud ERP

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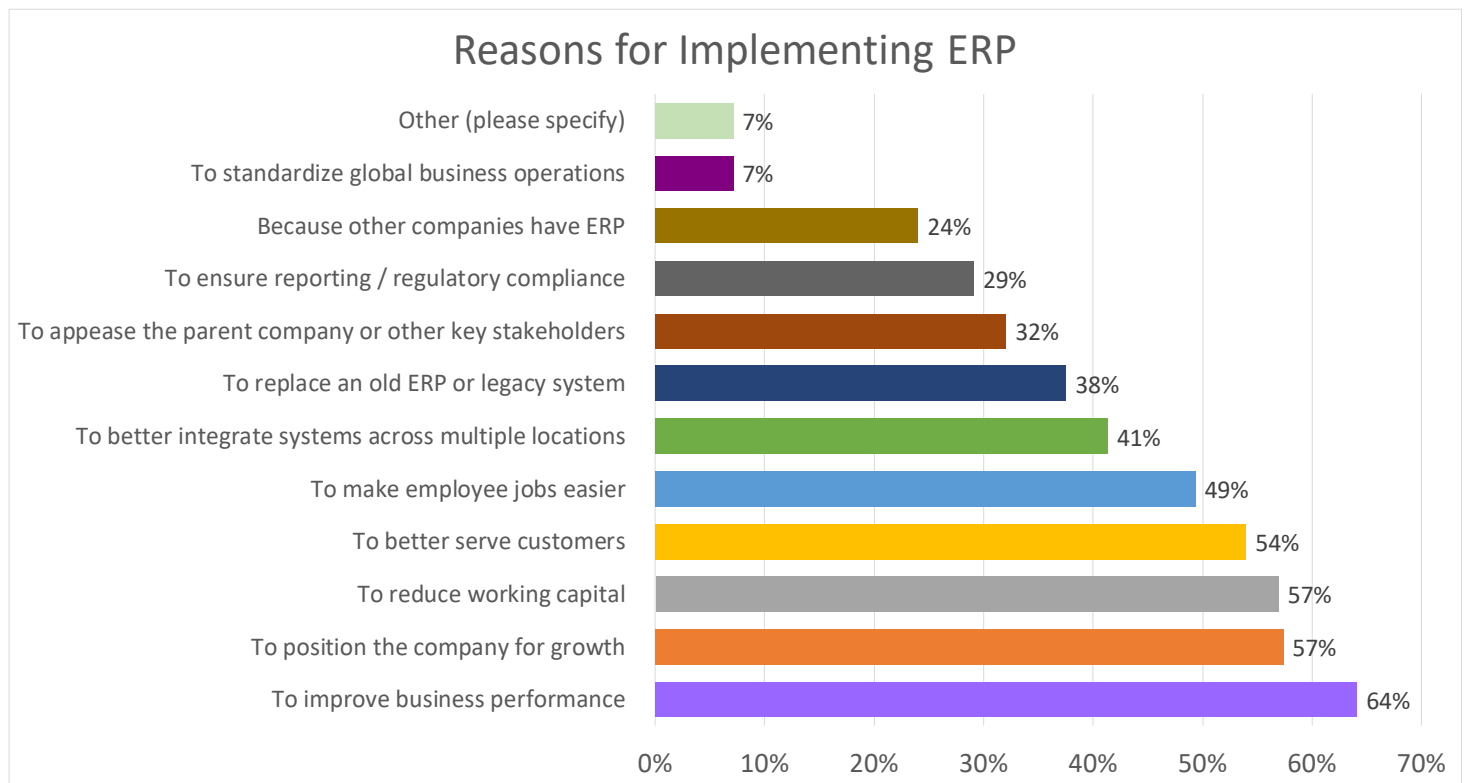
REASONS FOR
ERP IMPLEMENTATION

?

IMPROVE BUSINESS PERFORMANCE

Given the high costs to implement such an initiative, what motivates an organization to implement an ERP system? Does the perceived ROI play a major role in the decision to implement? How does an organization decide what solution to implement? The single most compelling reason our respondents implemented new ERP systems was to improve business performance. Many were also interested in positioning their organizations for growth, reducing working capital and serving customers better.

Comparing this with last year, we saw less emphasis on making employees jobs easier and replacing legacy systems. What this translates to is improved integration between the different functional areas within a value chain to ultimately optimize an organization's business processes and ensure crossfunctional alignment of business processes. Laying the foundation for optimizing critical processes, will help the selected ERP system enable organizational strategies, helping to support further growth on a scalable platform.

MANY WERE ALSO INTERESTED IN POSITIONING THEIR ORGANIZATIONS FOR GROWTH

Reasons for Implementing ERP

Reason	Percentage
Other (please specify)	7%
To standardize global business operations	7%
Because other companies have ERP	24%
To ensure reporting / regulatory compliance	29%
To appease the parent company or other key stakeholders	32%
To replace an old ERP or legacy system	38%
To better integrate systems across multiple locations	41%
To make employee jobs easier	49%
To better serve customers	54%
To reduce working capital	57%
To position the company for growth	57%
To improve business performance	64%

LEVEL
OF CUSTOMIZATION
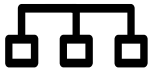
THIS YEAR'S SURVEY RESULTED IN AN OBSERVATION THAT COMPANIES ARE CUSTOMIZING A MORE SIGNIFICANT PORTION OF THEIR ERP, WITH 37% OF ORGANIZATIONS CUSTOMIZING BETWEEN 26%-50% OF THEIR ERP APPLICATION.

Comparing the averages from last year to this year, we saw an 11% increase. The average level of customization last year was 16%; compared to this years' respondents at an average of 27% customization. Customization requires code to be written to enable functionality not already enabled by the ERP system. The concern (typically associated with customization), is customized code is most often not supported in system upgrades and code will often need to be reviewed and tested during an upgrade.

There is, however, a place and need for customization. ERP software often needs to be customized to enable key business functions that provide an organization with competitive advantage in their market place or to support optimal transaction efficiency. It is a balancing act between changing the system to fit your process or changing your process to fit the system. Few typically want to customize their system, no one wants to change the way they've been working. During these decision points, it's important to ask oneself how these changes align with the business and IT strategies of their organization. It is a slippery slope when over-customizing the system, due to resistance to changing processes. On the other hand, recognizing where to preserve your competitive advantages is critical during the design as well as post-deployment of the ERP system.
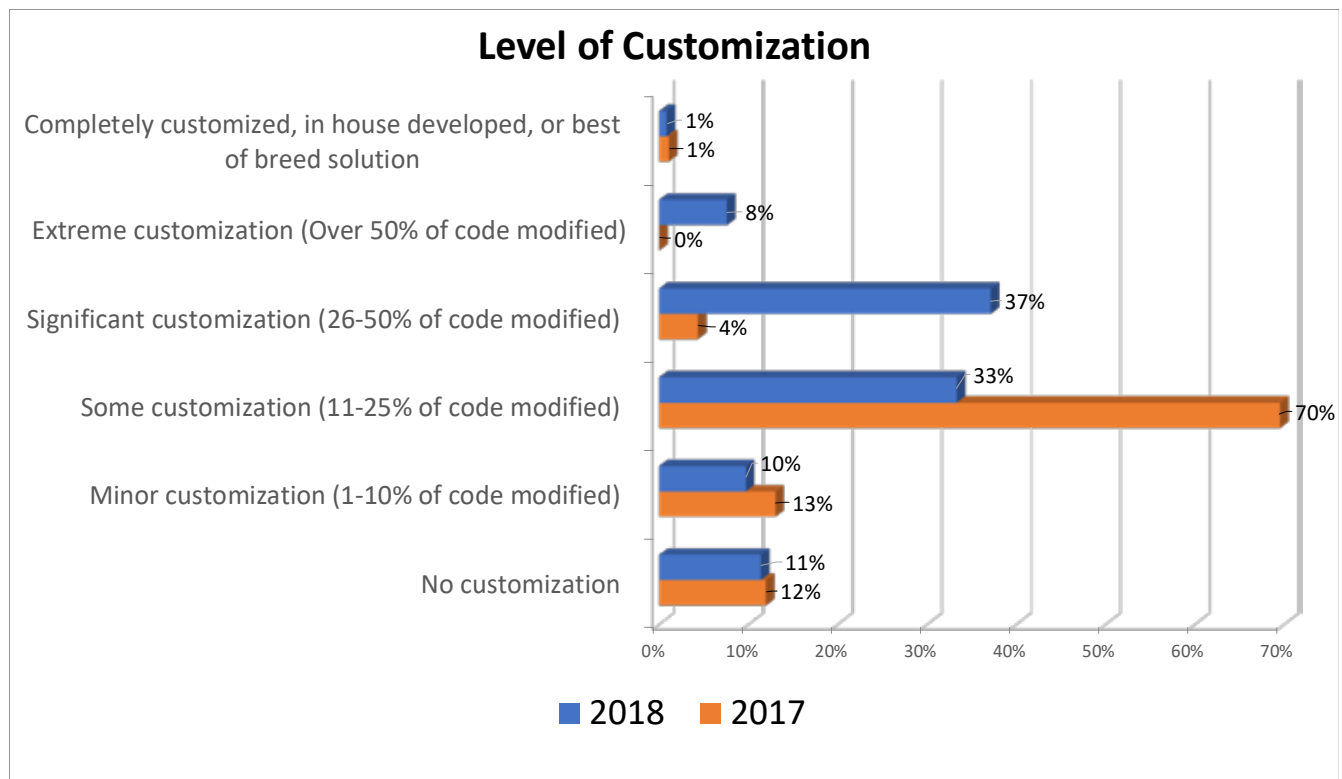
Level of Customization

Level	2018	2017
Completely customized, in house developed, or best of breed solution	1%	1%
Extreme customization (Over 50% of code modified)	8%	0%
Significant customization (26-50% of code modified)	37%	4%
Some customization (11-25% of code modified)	33%	70%
Minor customization (1-10% of code modified)	10%	13%
No customization	11%	12%

■ 2018 ■ 2017

IT IS A BALANCING ACT BETWEEN CHANGING THE SYSTEM TO FIT YOUR PROCESS OR CHANGING YOUR PROCESS TO FIT THE SYSTEM.
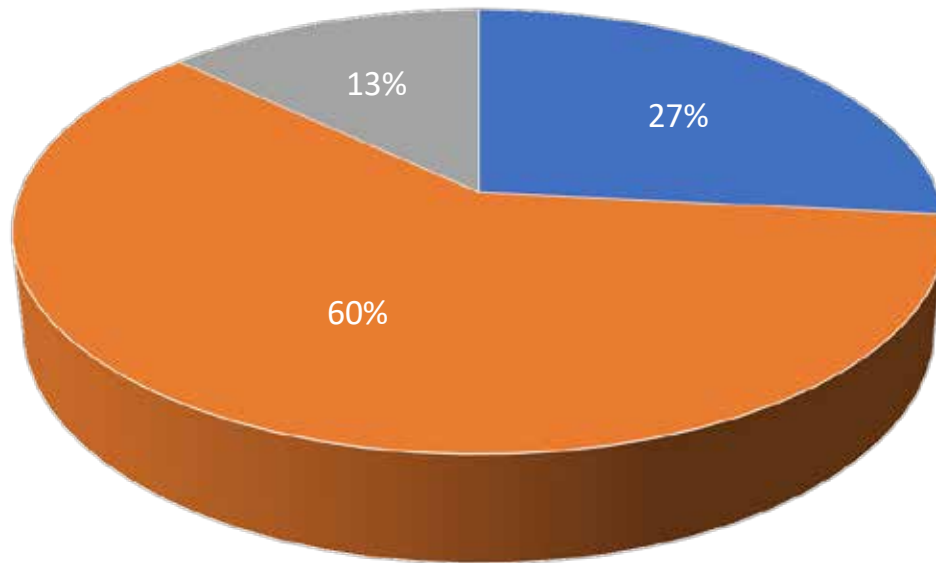
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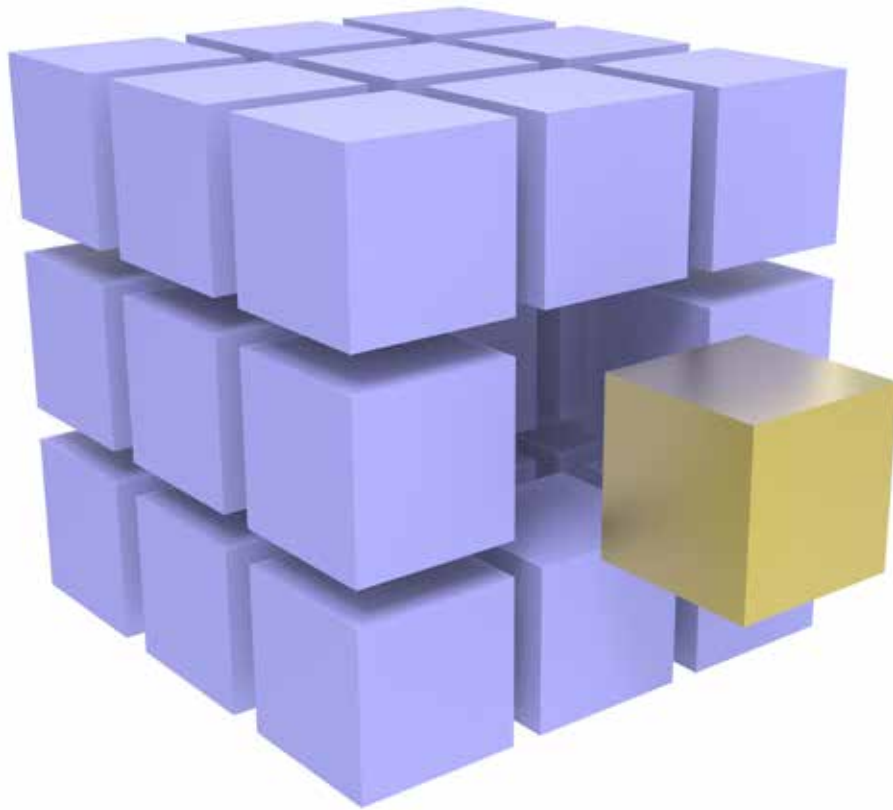
All companies go through some form of customization, although this year's numbers are surprisingly high (rule of thumb is anything over 20% when implementing a new system is a red flag). Typically, factors that drive customization include complexity of processes or transactions, supporting competitive advantage and the size of the organization. The majority of our respondents are fairly large organizations, with 85% of all respondents representing organizations $50M or more. The degree of customization varies significantly across the size of a company, with larger companies typically customizing more to preserve their competitive advantages, while smaller companies tend to leverage the "out of the box" functionality and best practices to help support growth.

ORGANIZATIONAL CHANGE MANAGEMENT

This year's responses indicate an 11% decrease for the number of organizations who have either a moderate or intense focus on OCM, while 27% of respondents indicated their organization had little or no focus.
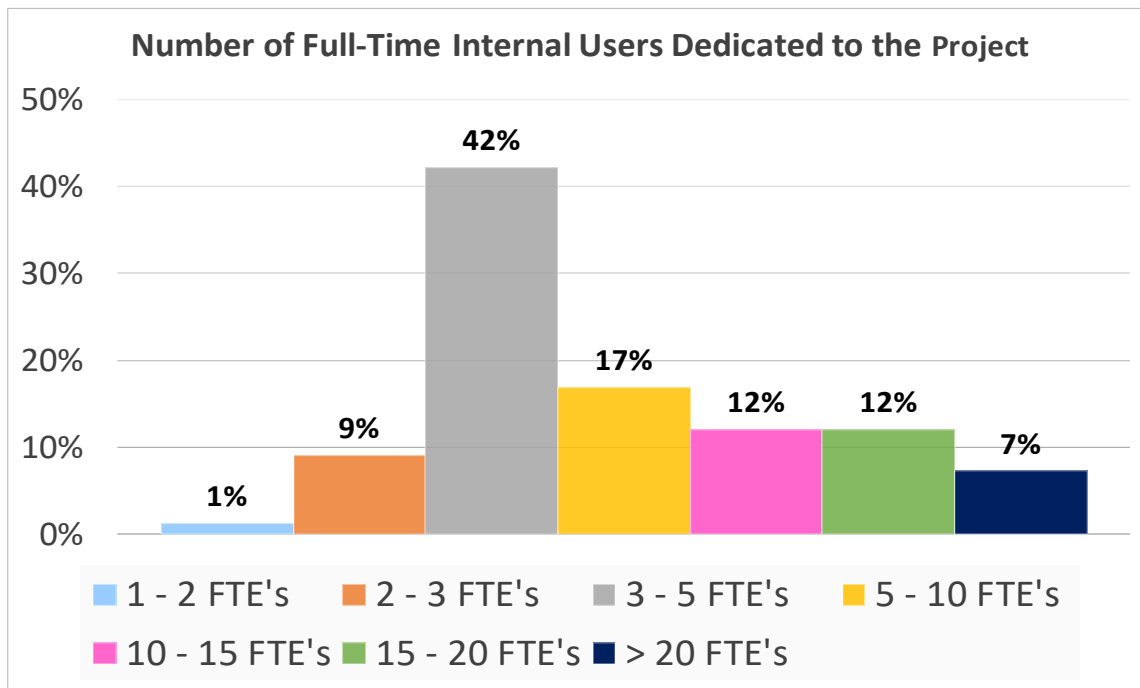
Organizational Change Management

- **Very little or no focus on change management** — 27%
- **Moderate focus on change management** — 60%
- **Intense focus on change management** — 13%

Organizational Change Management includes a variety of activities executed throughout the project lifecycle. These encourage buy-in and support for the organization to change. These activities include, and are not limited to, communication, planning and training. The objective of OCM is to instill a desire for change, prepare users for change, in doing so, ease employees through a change initiative with minimal disruption to the organization. Those who most highly value change management are typically individuals who have experienced a failed initiative.

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Number of Full-Time Internal Users Dedicated to the Project

- 1 - 2 FTE's — 1%
- 2 - 3 FTE's — 9%
- 3 - 5 FTE's — 42%
- 5 - 10 FTE's — 17%
- 10 - 15 FTE's — 12%
- 15 - 20 FTE's — 12%
- > 20 FTE's — 7%

Most organizations reported having three to five full-time internal resources dedicated to ERP implementation. The number and types of resources committed to a project, often, significantly impacts the project's likelihood for success. These resources should also have an appreciation and responsibility for the change management aspect of an ERP implementation. Throughout the implementation project, there are different resources with different skillsets, all will have different commitment expectations. Project managers and SME's are typically utilized more since they will be involved in activities such as requirements gathering, functional design, testing, data conversions and training activities across the program timelines. However, owners of the processes themselves, will have to be pulled off their day jobs to sign-off on the future-state design. These resources are often critical to the day-to-day operations of the organization and it's always a challenge to have them involved in the project while keeping the wheels turning internally. Staffing and backfilling of positions will need to be planned for.

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BUSINESS PROCESS IMPROVEMENT

A SIGNIFICANT 26 PERCENTAGE POINT DROP FROM LAST YEAR WHERE 75% OF RESPONDENTS IMPROVED ALL BUSINESS PROCESSES

95% of respondents improved some or all of their business processes. This is an important data point to consider when you embark on an ERP initiative. Both the technology and the processes are changing. Managing this change can be a significant feat and should therefore be a consideration, even in the early stages of planning an ERP initiative.

Business Process Improvement
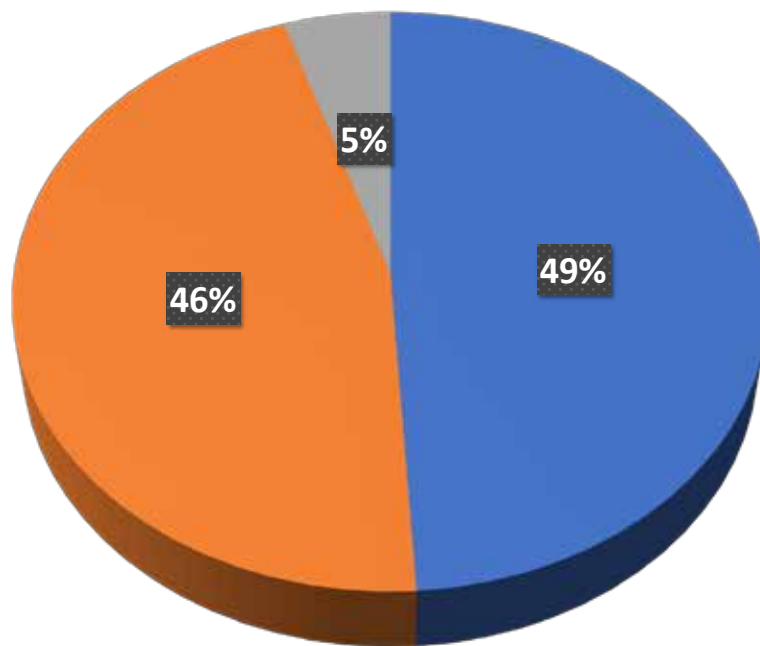
- ■ Improved all business proceseses
- ■ Improved key business processes
- ■ We did not improve business processes

PROJECT
BUDGET

A significant number of our respondents (64%) had their projects exceed their budgets. This is an improvement over last year's 74% of respondents being over budget. This year's respondents were also relatively satisfied with their implementation costs.

Project Budget
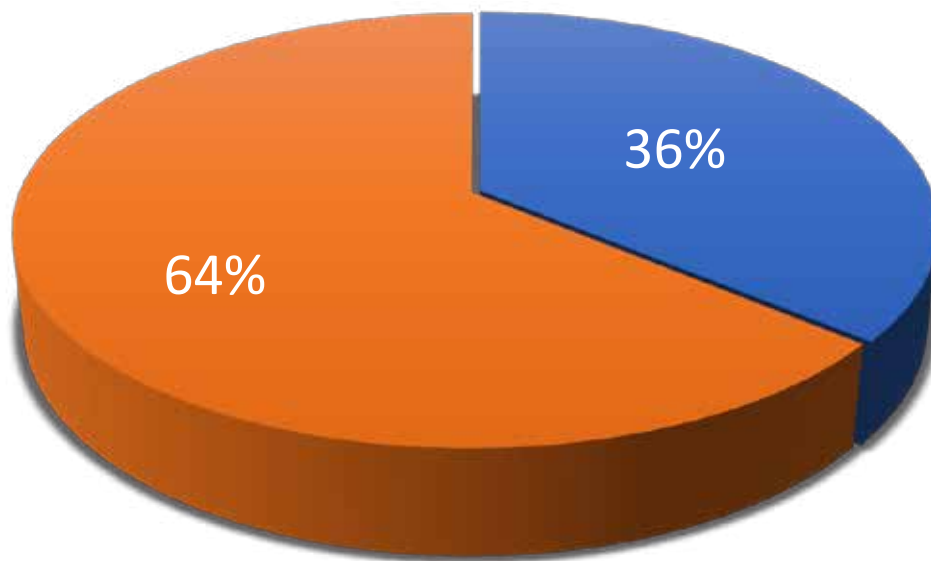
- Did not exceed Budget — 36%
- Exceeded Budget — 64%

Implementation Cost Satisfaction

VERY DISSATISFIED	DISSATISFIED	NEUTRAL	SATISFIED	VERY SATISFIED
4%	18%	21%	26%	31%
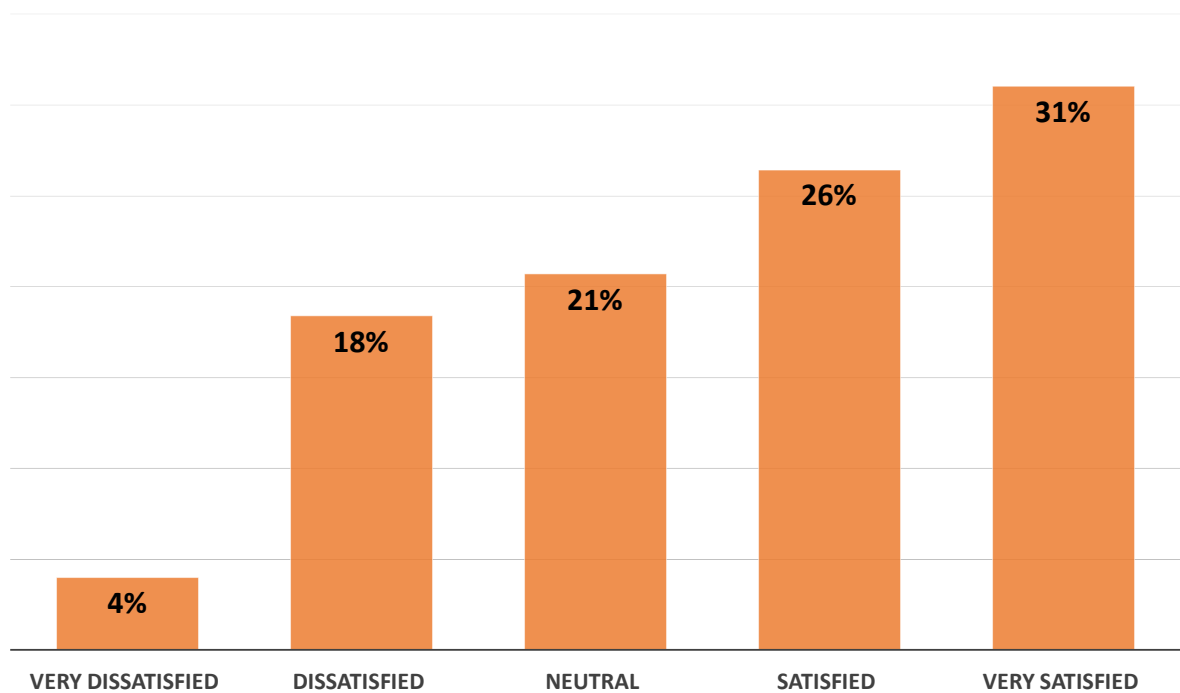
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BUDGET
OVERRUNS

A COMMON REASON FOR IMPLEMENTATION FAILURES, OR IN THIS CASE BUDGET OVERRUNS, IS NOT HAVING EYES WIDE OPEN AS TO WHERE THE COST AND TIME DEDICATED TO THE PROJECT WILL ARISE.

When projects go over budget there may be more than one reason, we asked our respondents to select all of the reasons why their projects exceeded budget. All of our respondents reported more than one reason for exceeding their initial budget.

Last year the top three reasons quoted as being most likely for budget overruns were, related to unanticipated technical or organizational issues, initial project budget was not realistic or the addition of technology requirements. Results this year are aligned.

Understanding and budgeting appropriately for the total cost of ownership of the implementation is a common pitfall for scope creep and running over budget. A proper evaluation of potential systems prior to selecting an ERP solution will help in establishing a more accurate scope for the project. This will account for potential customizations and integration costs, BPM and OCM projects, as well as any additional hardware upgrades or third party bolt-on products.

Larger, more complex organizations require larger and more complex ERP systems. Not every organization needs all the bells and whistles the Tier I packages can provide. A more realistic approach is to consider viable ERP solutions, flexible enough and scalable enough to support current and future growth, aligning with the organization's business and IT strategies.

Reasons for Budget Overages

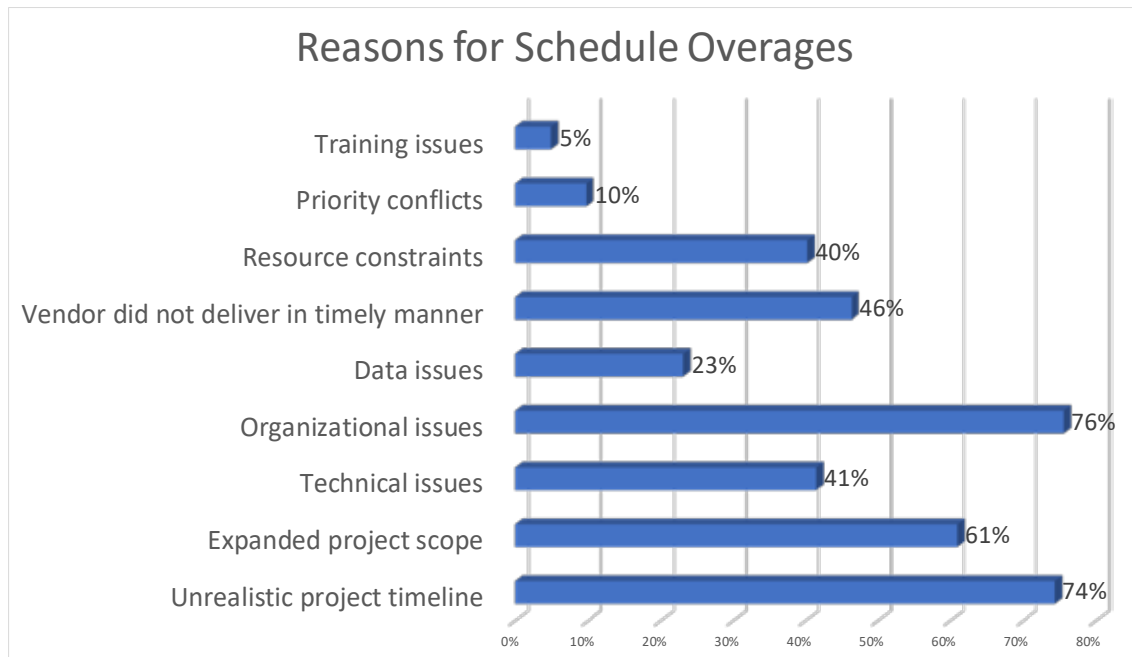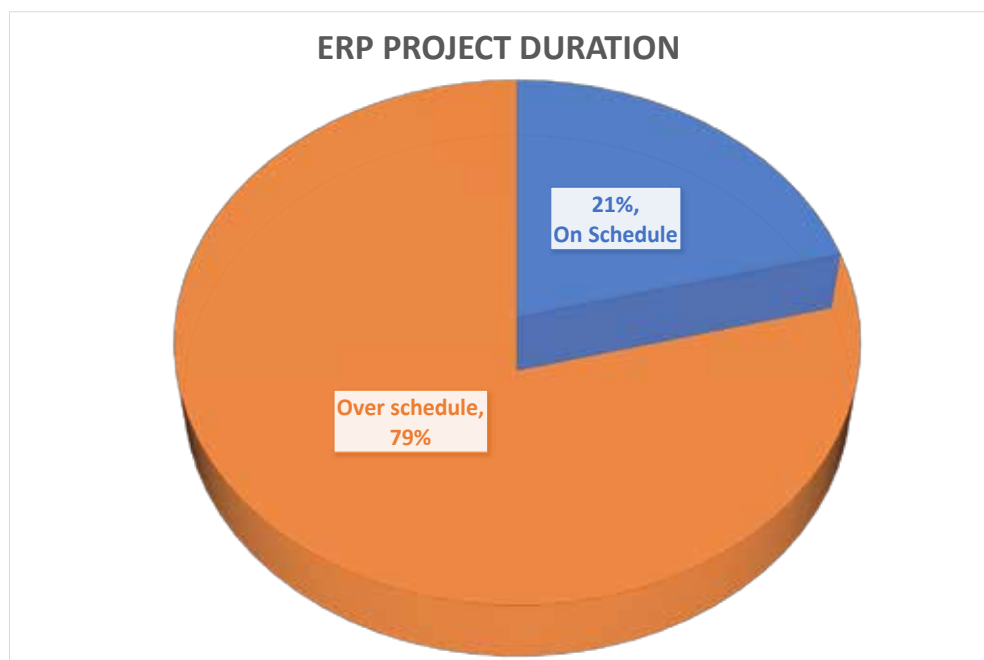| Reason	Percentage
Consulting fees rose as project schedule slipped	2%
Underestimated consulting fees	9%
Unanticipated technical/organizational issues	45%
Underestimated project staffing	35%
Additional technology requirements	41%
Expanded scope	31%
Unrealistic budget	43%
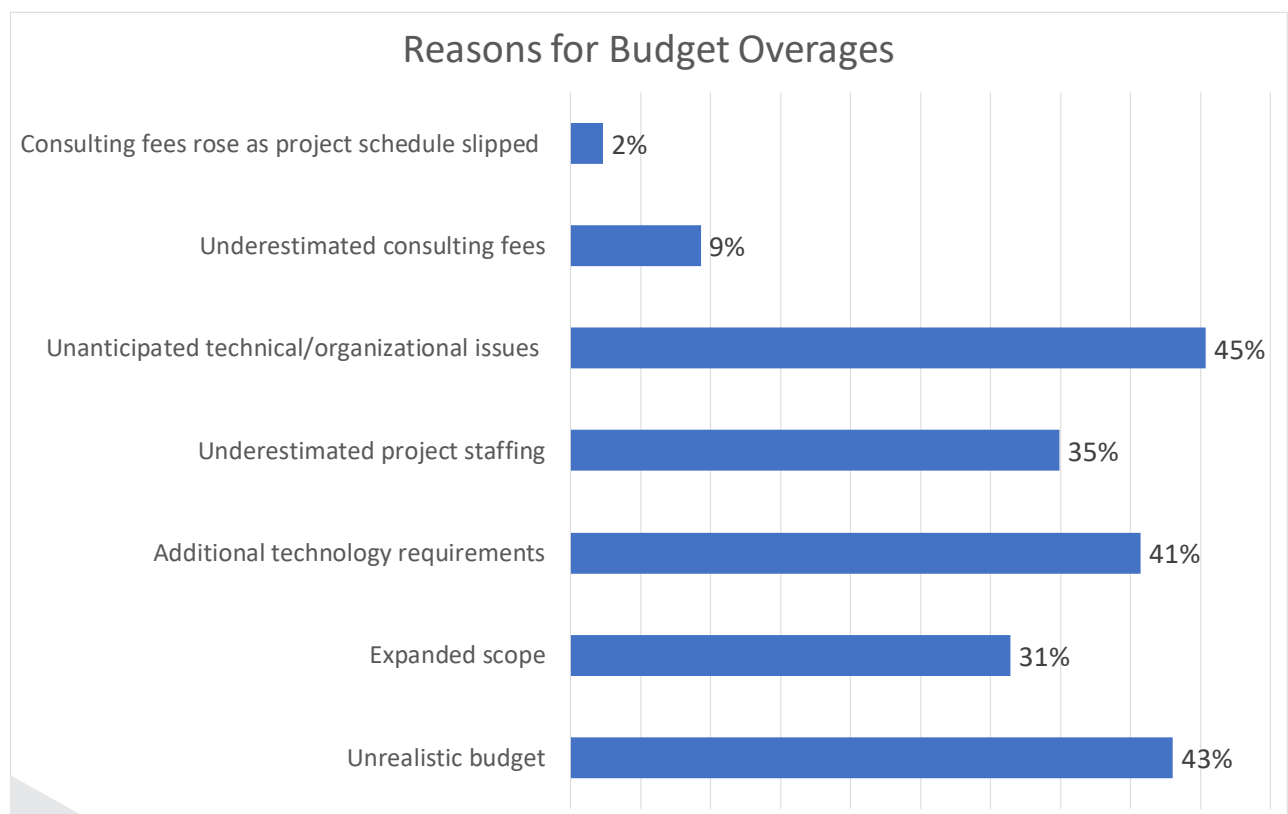
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PROJECT DURATION OVERRUNS

This year we saw 79% of our respondents reporting that their projects exceeded their initial timelines. Last year only 59% reported having exceeded their project durations. Those who reported duration overruns attributed the overruns to organizational issues, unrealistic timelines and expanded project scope. All these reasons have been reported as the most likely causes of schedule overruns for the past two years. Overall, the average implementation duration was 17.4 months and increase over last year's reported average of 16.9 months. After a project plan is built and the implementation has begun, it is still critical to walk the halls and look for warning signs of potential disruptions. Monitoring end-user and process owner involvement is critical throughout all stages of the project. By proactively implementing training and other change management exercises, an organization can proactively identify, assess and resolve risks that can continue to push out the go-live date.

Reasons for Schedule Overages

Reason	Percentage
Training issues	5%
Priority conflicts	10%
Resource constraints	40%
Vendor did not deliver in timely manner	46%
Data issues	23%
Organizational issues	76%
Technical issues	41%
Expanded project scope	61%
Unrealistic project timeline	74%

ERP PROJECT DURATION

- 21%, On Schedule
- Over schedule, 79%

Projects respondents were asked to provide reasons for why their ERP project exceeded the original timeline and to check all options that applied, their responses are reflected above.

PAYBACK
PERIOD

Timeline to Recoup Costs

- **Less than 1 year** (red): 4%
- **2 years** (orange): 24%
- **3 years** (gray): 50%
- **4 years** (yellow): 16%
- **5 years or more** (light blue): 1%
- **Have not recouped costs** (green): 2%
- **Don't know / not sure** (dark blue): 3%
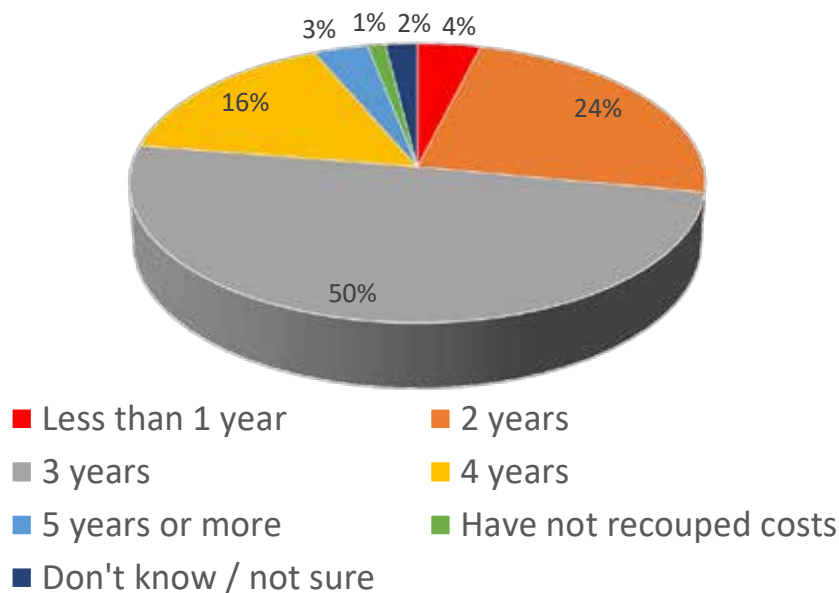
This year, 50% of organizations recouped the cost of their ERP implementation within three years. This is an increase of 31% over last year's 19%.

While last year, 15% of respondents realized benefits within one year, this year only four percent recouped their costs within only one year.

OPERATIONAL DISRUPTION

Experienced Operational Disruption

34%

66%

■ Yes   ■ No
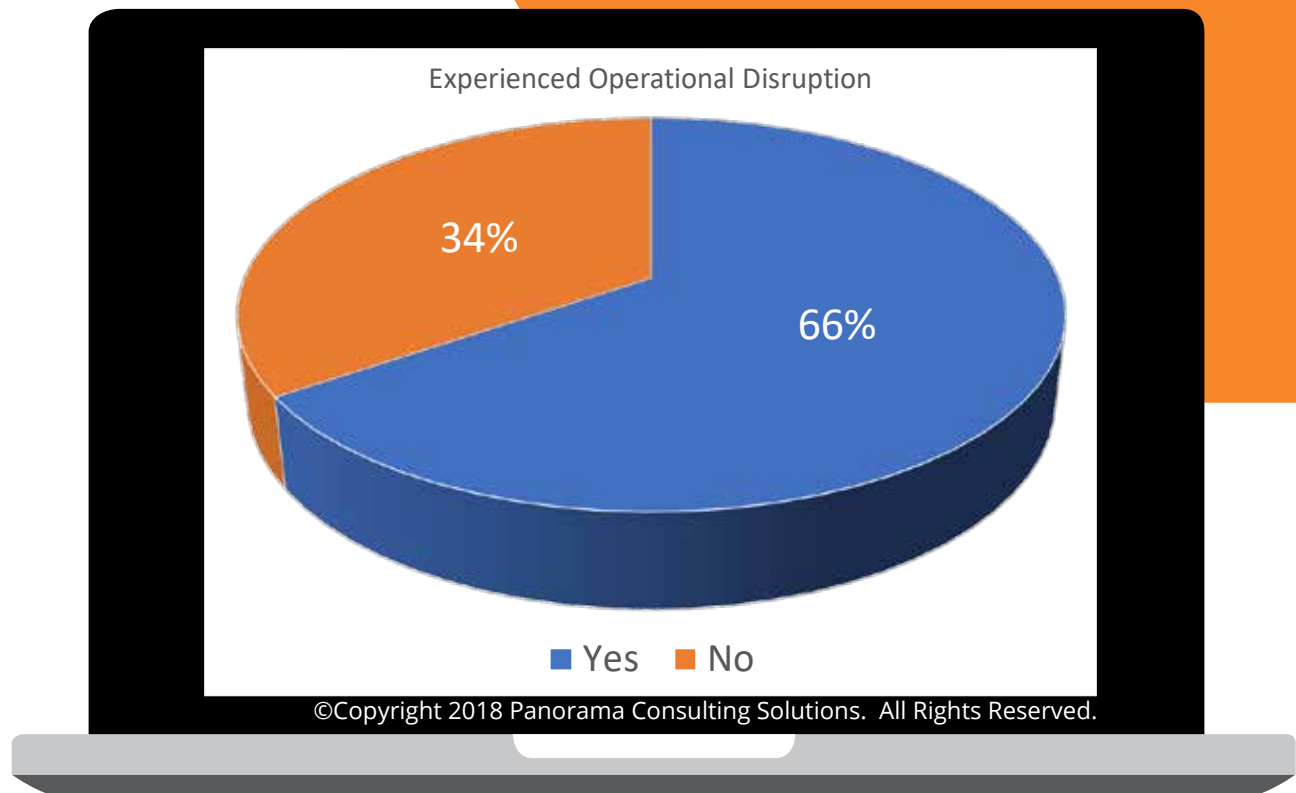
66% of organizations experienced operational disruption while implementing a new ERP. This is a increase of 10 percentage points over last year's 56%.

Length of Operational Disruption

Duration	Percentage
3-6 months	9%
2-3 months	20%
1-2 months	46%
2-4 weeks	16%
1 week or less	9%
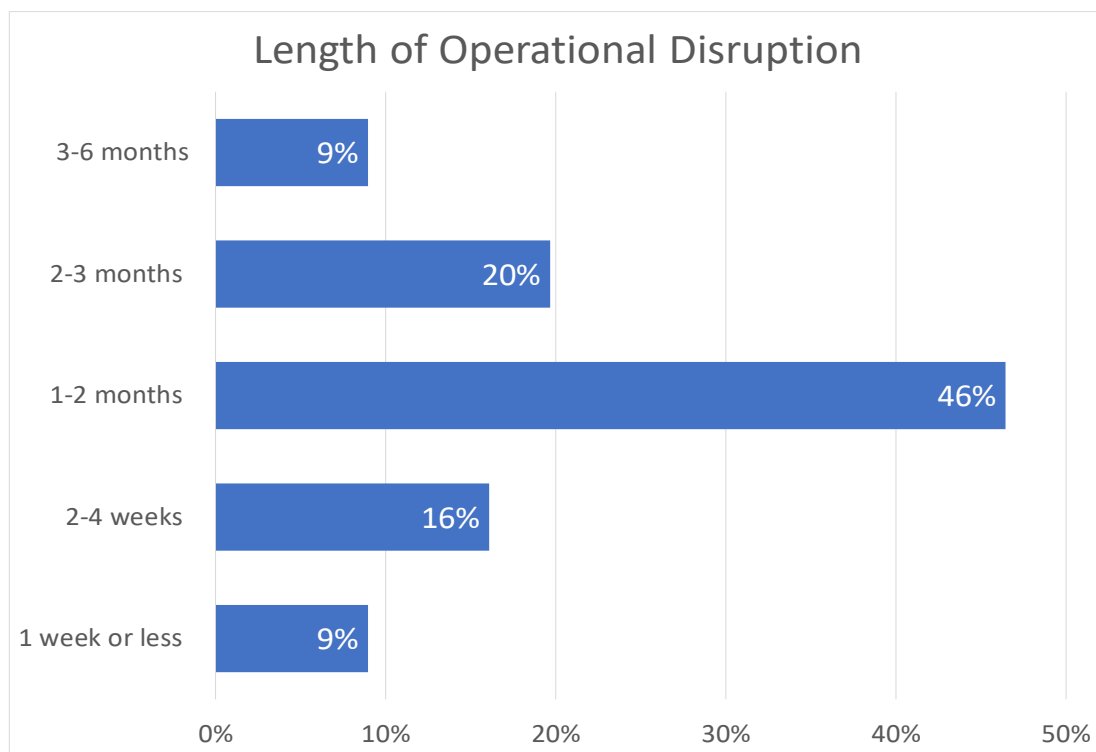
- 46% of respondents reported that their operational disruption lasted between one and two months.
- While only nine percent experienced disruption that lasted over three months.

Project success won't have anything to do with technical features, rather it will come down to how well you handle business process reengineering (BPR) and OCM – the most important success factors for any ERP implementation. We often hear organizations say the biggest obstacle to the success of their ERP initiative was misalignment between project management and change management. Often, people involved think they should had invested more into change management, sponsorship and resourcing.

BPR AND OCM ARE THE MOST IMPORTANT SUCCESS FACTORS FOR ANY ERP IMPLEMENTATION.

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BENEFITS
REALIZATION

Respondents realized between 30% - 80% of their projected business benefits.

Benefits Realized

	0%-30% of projected benefits	31%-50% of projected benefits	51%-80% of projected benefits	81%-100% of projected benefits
	1%	43%	48%	8%
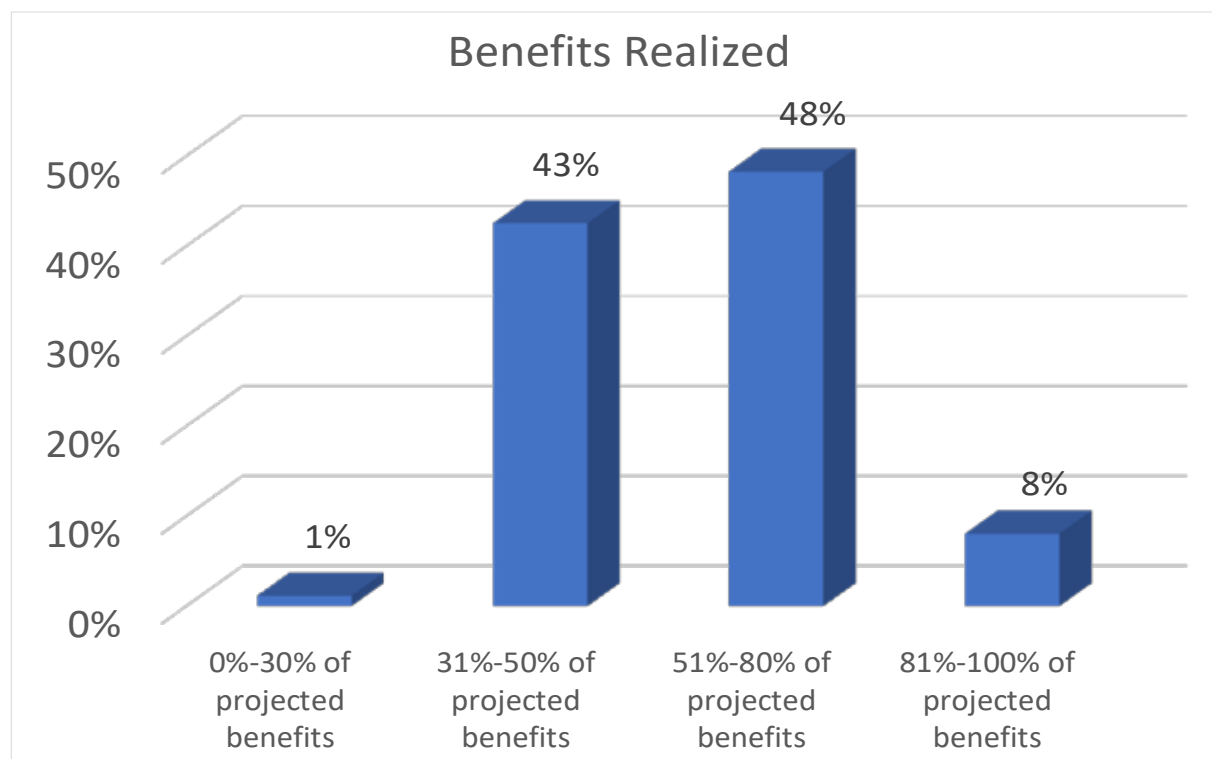
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Interestingly, this year's report did not have any respondents reporting they didn't have a business case against which to measure benefits realized. Most respondents realized between 51%-80% of their projected business benefits.

Months Until Benefits Realized

Category	Percentage
24-36 months post 'go-live'	10%
19-24 months post 'go-live'	13%
13-18 months post 'go-live'	37%
7-12 months post 'go-live'	26%
4-6 months post 'go-live'	13%
0-3 months post 'go-live'	1%
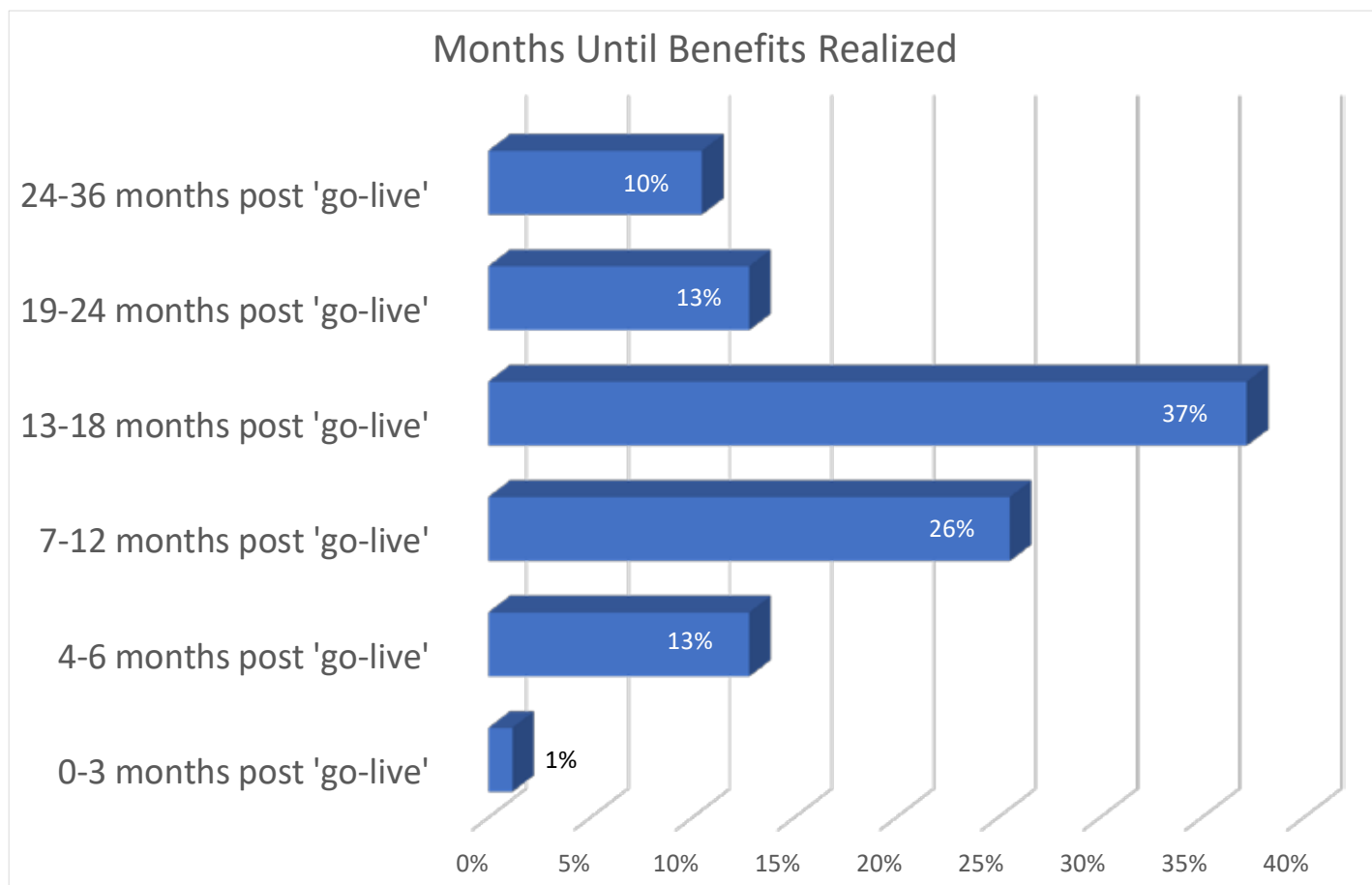
This year we saw most respondents realizing business benefits within 13-18 months of going live. This is a significant shift from last year when 48% of respondents reported realizing business benefits within the first six months following go-live.

TYPES OF BENEFITS REALIZED

Typically, organizations are looking to realize multiple benefits through an ERP implementation.

Our survey respondents were offered the option of checking all the options that applied to their implementation.

Too many organizations start to truly document what benefits they would like to achieve during the implementation or even post go-live. The creation of a business case, performance metrics or a benefits realization plan doesn't just help with scope creep, it also helps with defining and measuring success, prioritization of pain points and opportunities for improvement. The other benefits are establishing accountability around benefits achieved and expectations management.

Compared with last year, more organizations realized improved information availability and fewer were able to reduce the duplication of effort.

Types of Benefits Realized

| Benefit	Percentage
Transform our business	10%
Improved interaction with customers	13%
Better visibility into operations	14%
Reduced IT maintenance costs	14%
Improved interaction with suppliers	15%
Better informed decision-making	17%
Standardize operations	18%
Less duplication of effort	23%
Reduced operating/labor costs	37%
Controls for compliance	38%
Better decision-making	43%
Improved lead time and inventory levels	44%
Improved productivity and efficiency	44%
Increased interaction/integration of business operations/process	46%
Improved data reliability	55%
Availability of information	80%

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IMPLEMENTATION
OUTCOME

It's important to note, many companies don't clearly define success, which is why so many don't know if they were successful or not.

42% of respondents this year would deem their ERP Implementation a success. This is a substantial drop from the 82% of respondents who considered their projects to be a success last year.

Defining your organization's quantitative metrics for implementation success prior to project initiation will help your project teams focus, serve to help communicate project progress and provide the ability to continually align project plan corrections to achieve these metrics.

Implementation Outcome

- Success 42%
- Failure 28%
- Don't know 30%
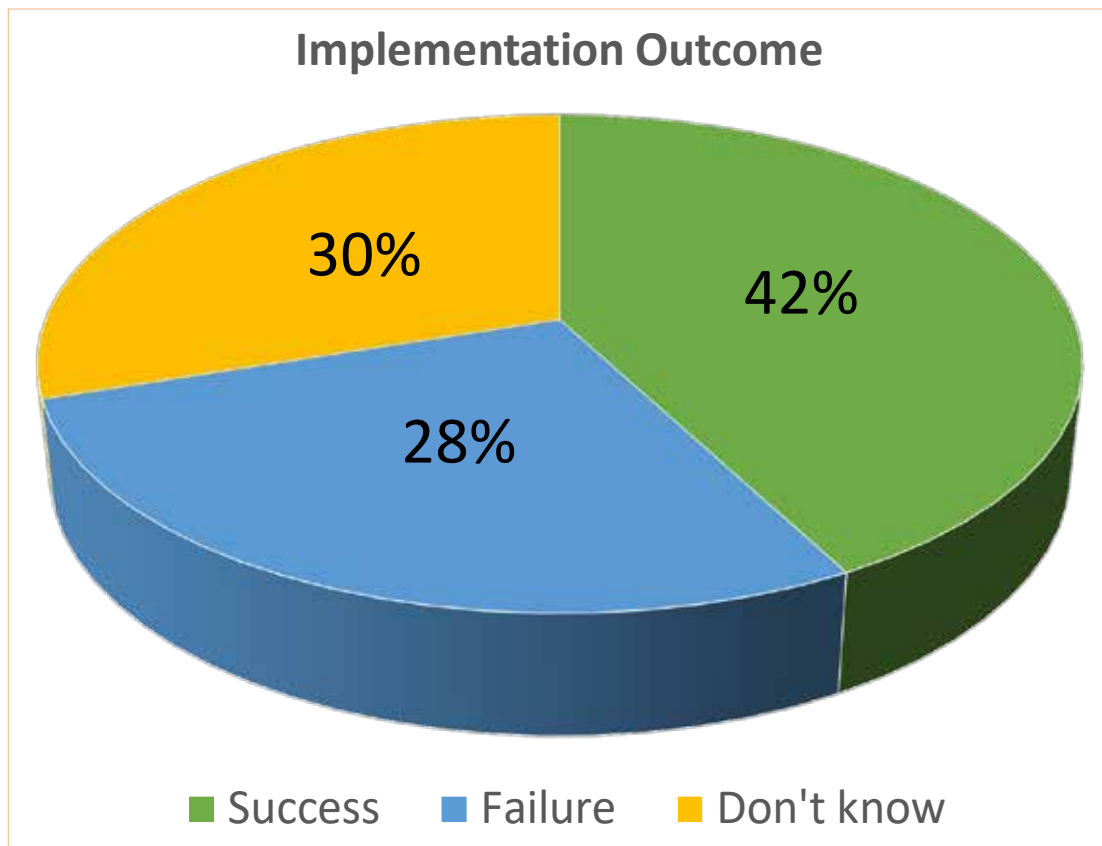
Measuring the project regularly will also help your team identify issues as they arise and mitigate the risk associated with the issues via early identification.

These are a few examples of metrics of project success that you may choose to use:

- Key Business KPI's
- User Adoption
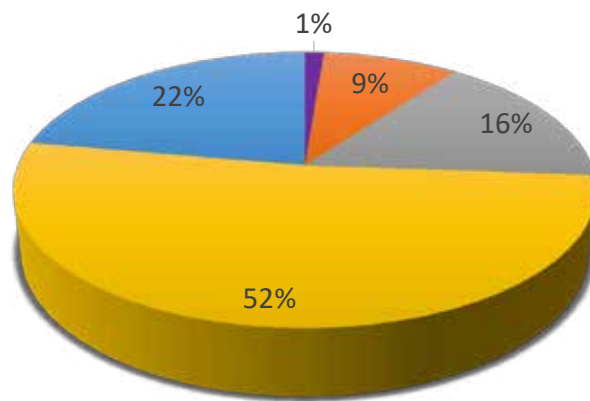- Project Actuals vs Budget (time and financials)

When these metrics are in place and regularly monitored an organization is able to determine their ability to achieve overall project success.

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VENDOR AND SOFTWARE SATISFACTION

Overall Experience With ERP Vendors

1%
22%
9%
16%
52%

■ Dissatisfied ■ Neutral ■ Satisfied ■ Very Satisfied ■ Very Dissatisfied

68% of respondents were satisfied or very satisfied at their overall experience with ERP Vendors, with only 23% expressing dissatisfaction. This is a decrease of 37% in dissatisfied ERP customers.

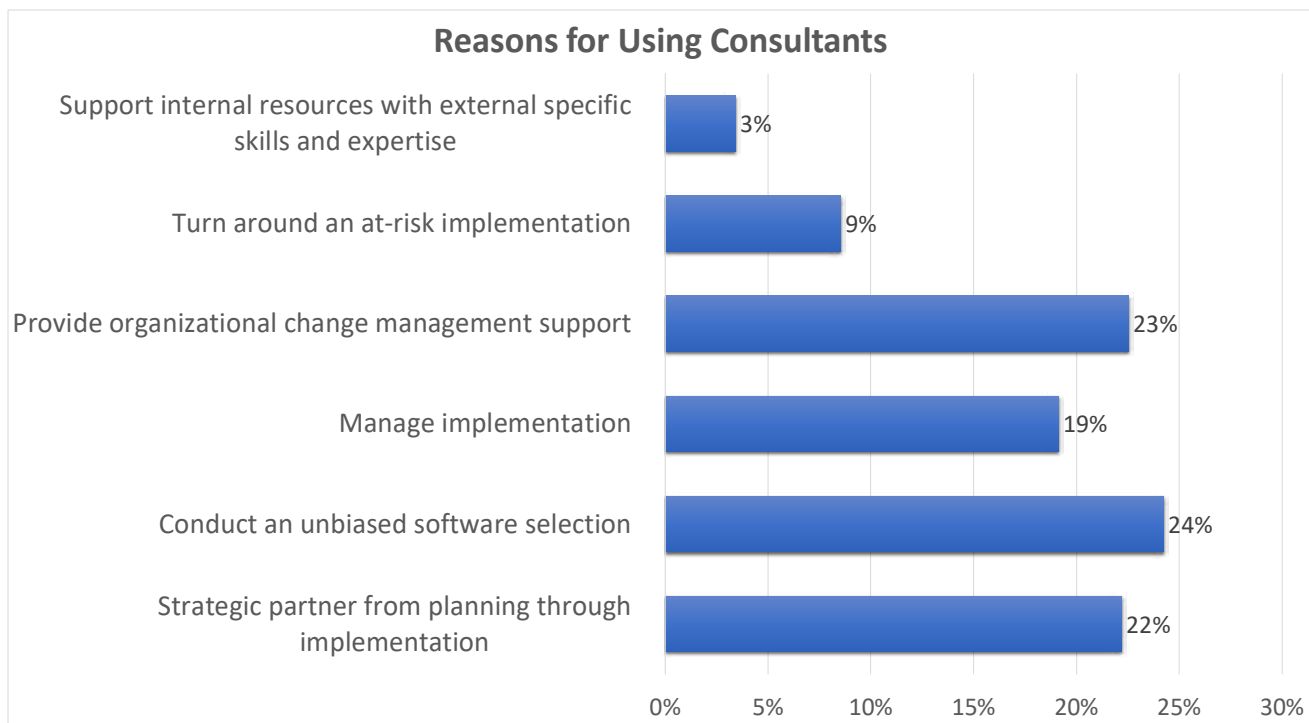When an organization begins to engage with a vendor there should be alignment between the vendor(s) and the organization on expectations. Expectations you may want to gain alignment on prior to starting the project include:

- Vendor consultants experience with the software
- Culture fit with your organization
- Ability to lead or support project
- Frequency and quality of interactions

Vendor interactions that are well managed and have very clearly defined expectations leave both vendor and customers more satisfied.

REASON FOR USING
CONSULTANTS

Reasons for Using Consultants

Reason	Percentage
Support internal resources with external specific skills and expertise	3%
Turn around an at-risk implementation	9%
Provide organizational change management support	23%
Manage implementation	19%
Conduct an unbiased software selection	24%
Strategic partner from planning through implementation	22%

The above results are in alignment with results we have seen in the past. Implementation planning and OCM focus can, when executed effectively, improve a project's likelihood of success.

Data Summary by Year

Year	2013	2014	2015	2016	2017
Average Annual Revenue of Reporting Organizations	$530M	$960M	$464M	$445M	$437M
Implemented Cloud ERP	11%	11%	27%	6%	21%
Vendor Satisfaction	86%	70%	45%	54%	26%
No Customization	9%	7%	10%	12%	11%
Average Project Cost Percentage	5.5%	4.6%	5.9%	6.5%	3.6%
Experienced Cost Overruns	54%	55%	57%	74%	64%
Average Project Duration (in months)	16.3	14.3	21.1	16.9	17.4
Experienced Duration Overruns	72%	75%	57%	59%	79%
Received 50% or Less Benefits	66%	41%	46%	37%	44%
Experienced Operational Disruption	51%	52%	48%	56%	66%

ABOUT
PANORAMA CONSULTING SOLUTIONS

Panorama Consulting Solutions specializes in enterprise consulting, infrastructure consulting and digital transformation for mid-to large-sized, private and public sector organizations across the globe. One hundred percent independent of affiliation, Panorama helps firms evaluate and select software, implement software and navigate organizational changes to ensure that clients realize the full benefits of their enterprise software projects. We also offer our clients IT strategy, business process reengineering, IT staffing, independent verification and validation, project management oversight, expert witness testimony and litigation support.

Panorama maintains a global presence with clients and consultants throughout the world. More information can be found on our website, Panorama-Consulting.com and social media.

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