

Survey Report - 2023

State of Legacy ASP/VB6 - Support, Modernization and Migration in US



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Introduction

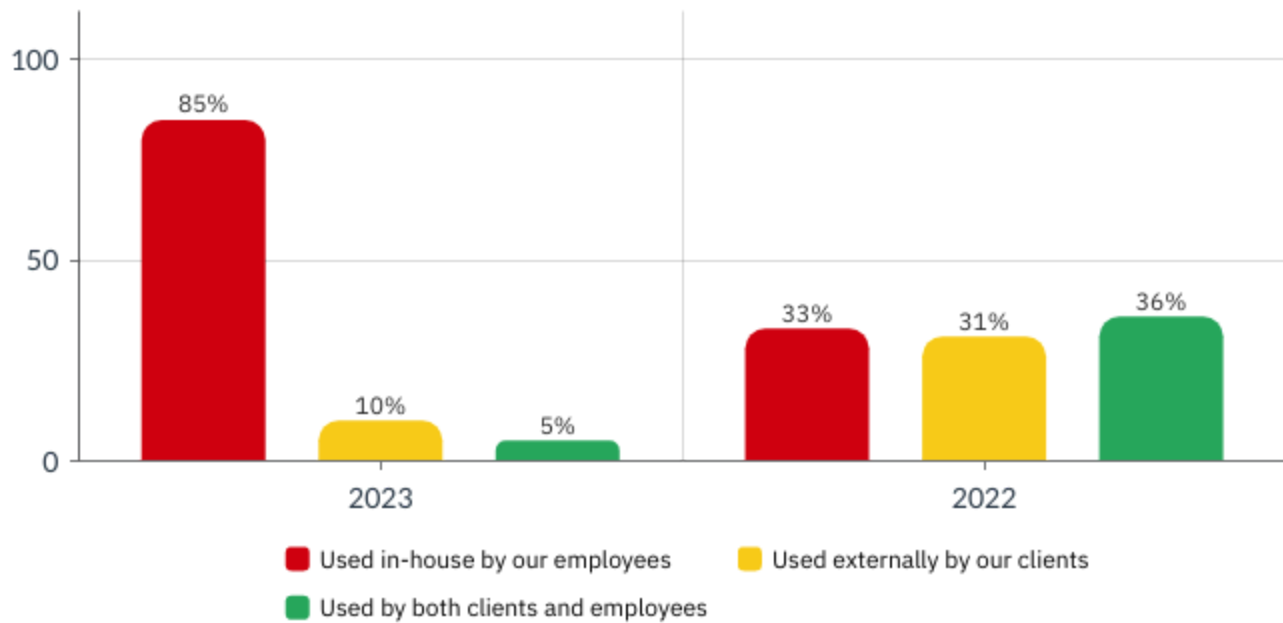
Macrosoft, a leading provider of professional services for Visual Basic 6 to .NET and Classic ASP to ASP.NET migration, is dedicated to assisting companies with legacy technology. Visual Basic 6 and Classic ASP were once powerful software development languages offered by Microsoft. Despite Microsoft's discontinuation of support for VB in 2008 and APS in 2020, numerous global companies continue to rely on these languages. Leveraging our proprietary tools and techniques, Macrosoft has perfected the efficient migration of legacy programs to modern technology platforms.

In line with our expertise, Macrosoft recently conducted the second annual State of Legacy ASP/VB6 - Support, Modernization, and Migration in the United States survey in June 2023. This survey, comprising 20 multiple-choice questions, was administered via SurveyMonkey. Invitations to participate were extended to our comprehensive client contact list, consisting of 15,000 professionals. A total of 91 individuals from over 50 identified companies actively participated, completing the entire survey. The participation rate of 100% and the diverse representation of respondents from various industries and companies contribute to the robustness and reliability of the survey results.

To ensure the confidentiality of participants, the survey results are presented in aggregated form, protecting the anonymity of individuals. Alongside the direct tabulations and graphical representation of the survey findings, we provide an in-depth analysis of the results, examining their implications and impact on the industry. Macrosoft intends to conduct this survey annually, with evolving questions to address the changing landscape. For any inquiries regarding this survey, please contact Joe Rafanelli, Director Technical Solutions at Macrosoft, Inc., via jrafanelli@macrosoftinc.com.

Furthermore, Macrosoft is well-prepared to provide an industry expert who can present these results to industry user groups upon request.

Q1 Is your ASP/VB application used in-house to support your company, or used by your clients?

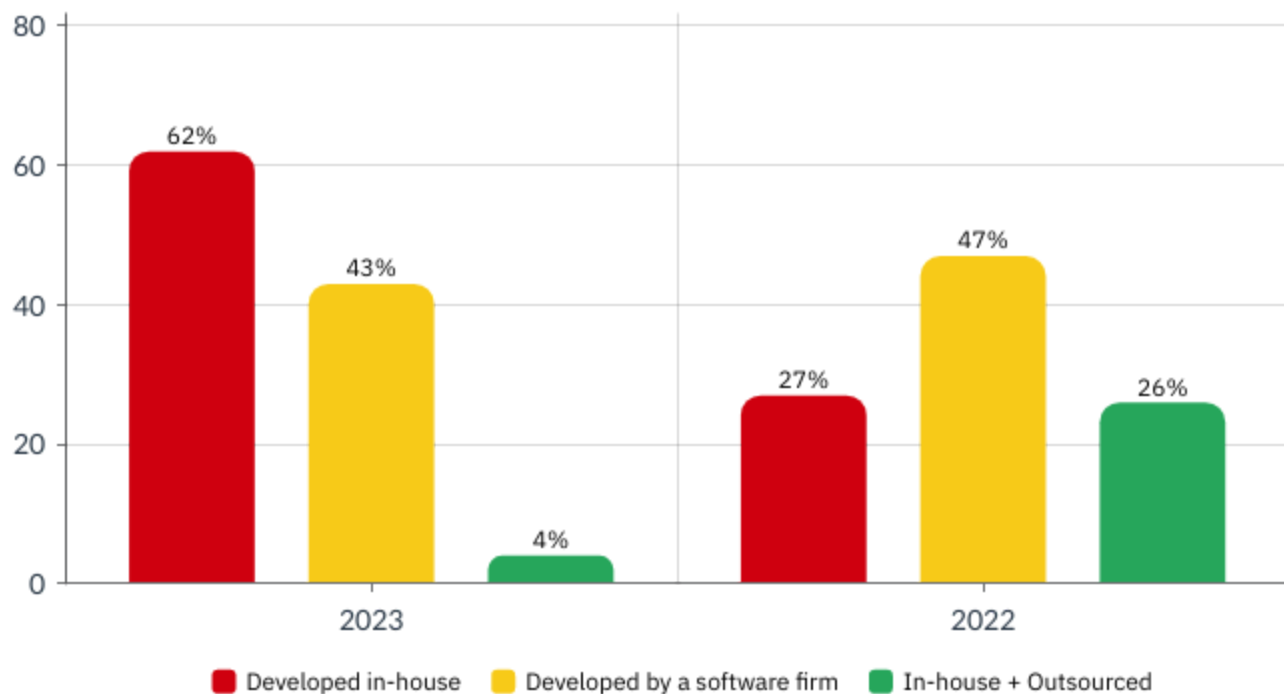


Survey Question Analysis:

The 2023 survey revealed a significant shift in respondents compared to the 2022 survey. In 2022, 36% of participants reported using their ASP/VB applications to support both clients and employees, but this figure dropped drastically to only 5% in 2023. Additionally, the percentage of participants who used these applications exclusively in-house increased from 33% in 2022 to 85% in 2023, while the usage of externally-facing applications for clients decreased from 31% to only 10% in 2023. This shift suggests that client-facing systems are undergoing modernization at a faster pace compared to internal systems.

Despite both ASP and VB-based applications reaching their end-of-life status some time ago, our survey found that over 80% of companies still rely on legacy applications to support their in-house employees. This presents an opportune moment to transform your business for the future. When considering migration options, it is crucial to prioritize a platform like .NET, which offers robustness, security, mobile readiness, and facilitates zero downtime through fast and easy maintenance capabilities for your applications.

Q2 Was your ASP/VB program developed in-house or by an external software development firm?



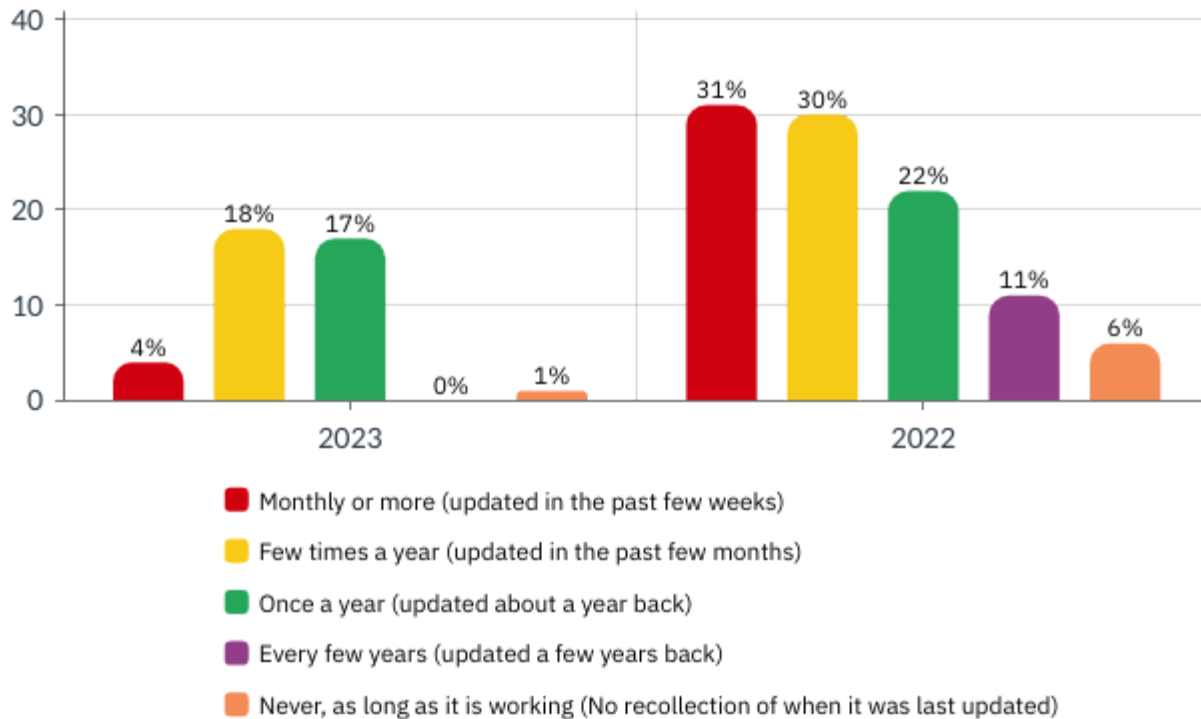
Survey Findings – According to the results of the Macrosoft 2023 survey on Visual Basic 6 and Classic ASP, 34% of the participants opted to outsource their ASP/VB applications development to a reputable software firm. In contrast, 62% of the respondents chose to develop the applications in-house, while a smaller percentage of 4% indicated that it was a combined effort.

Analysis – The fact that 62% of the companies pursued in-house development aligns with the findings from a prior question, where 85% of the applications were reported to be utilized by internal employees. It is not uncommon for organizations to leverage the expertise and supplementary resources offered by software development companies when constructing custom applications. However, this circumstance raises two important concerns:

1. It is imperative for a company's internal developers to possess comprehensive knowledge of the source code. This ensures their ability to effectively update and maintain the application once the initial development phase is completed.
2. Companies must take the necessary steps to establish ownership of the underlying source code. This grants them the freedom to introduce changes, updates, or other modernizations to the application as required.

At Macrosoft, we recognize the significance of these concerns and aim to provide solutions that address the challenges faced by organizations in managing their ASP/VB applications effectively.

Q3 How frequently do you make changes / updates to the current ASP/VB application? Or if more relevant to your situation, when was the system last updated?



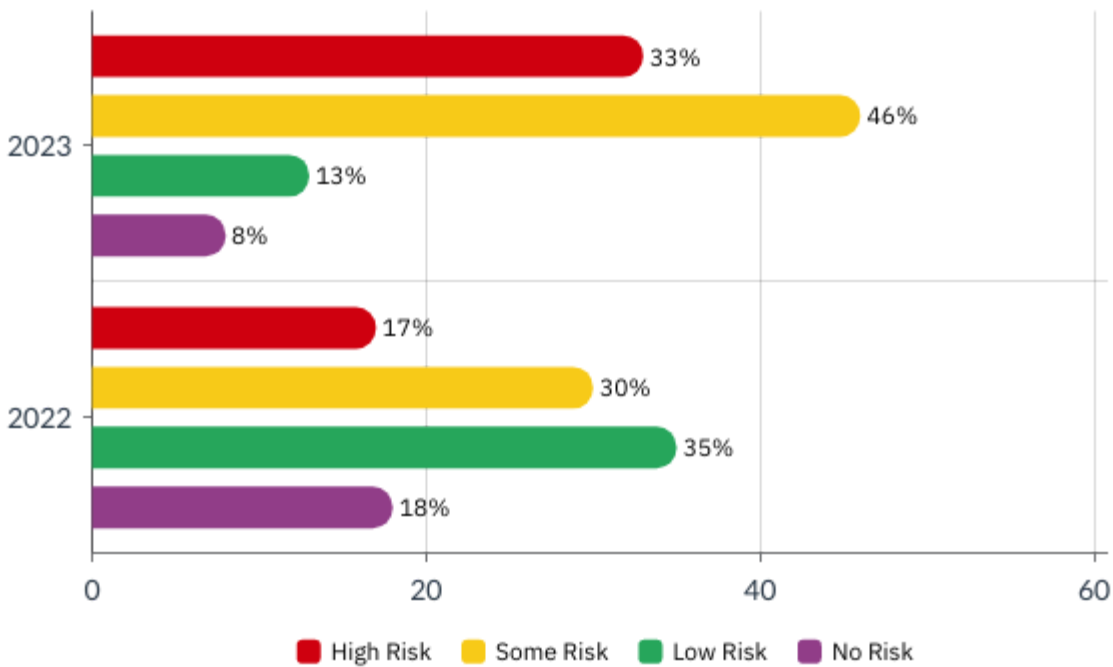
The results of the Macrosoft 2023 survey on Visual Basic 6 and Classic ASP reveal that 4% of the participants indicate changes and updates are made on a regular basis, occurring monthly or more frequently. Additionally, 18% of the respondents state that changes are made a few times a year, while the majority, 77%, indicate that changes occur annually. Only 1% of the participants mentioned that it has been years since they last updated their ASP/VB applications.

Our analysis indicates that a significant majority, over 99% of companies, affirm that their VB/ASP applications undergo changes on an annual basis. The consistent need for updates and changes prompts organizations to consider whether VB/ASP remains the optimal technology platform to support their operations. It is crucial for these companies to evaluate the adoption of a modern technology platform, as it offers a wider array of functionality, including cloud integration, web capabilities, and microservices, among others. Additionally, a modern technology stack provides access to a larger pool of qualified developers, ensuring ongoing support and development expertise.

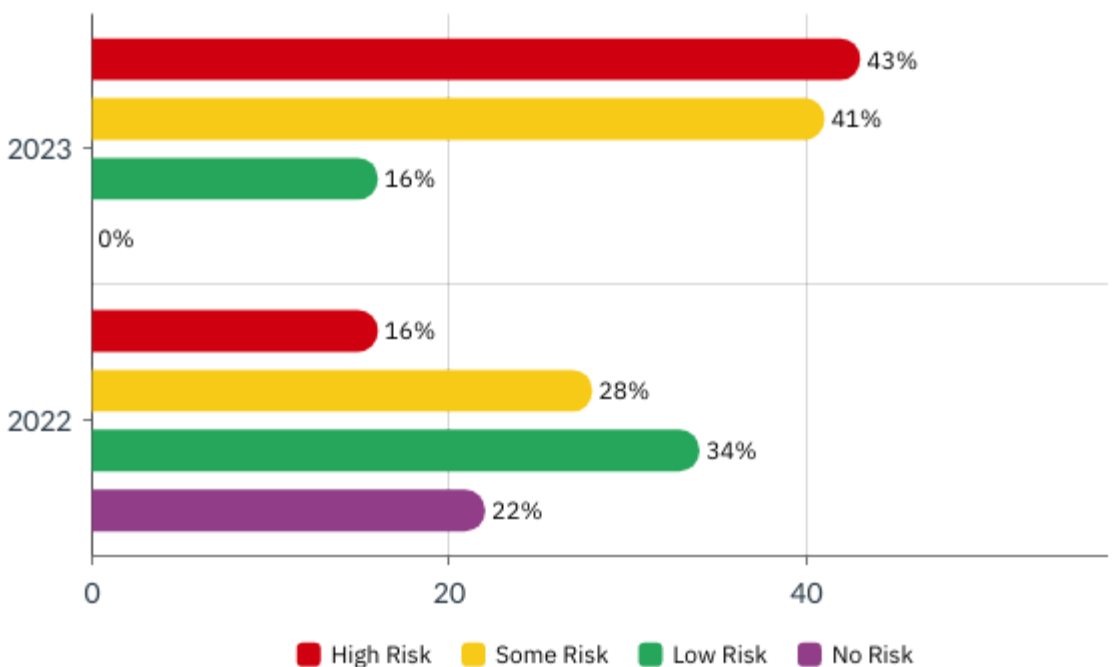
At Macrosoft, we understand the importance of embracing modern technology solutions to meet evolving business needs and maintain competitiveness. We are committed to assisting organizations in their transition to a more robust and contemporary technology platform.

Q4 Rate the potential risks your legacy ASP/VB application may face?

01. Incompatible with Operating System (OS)

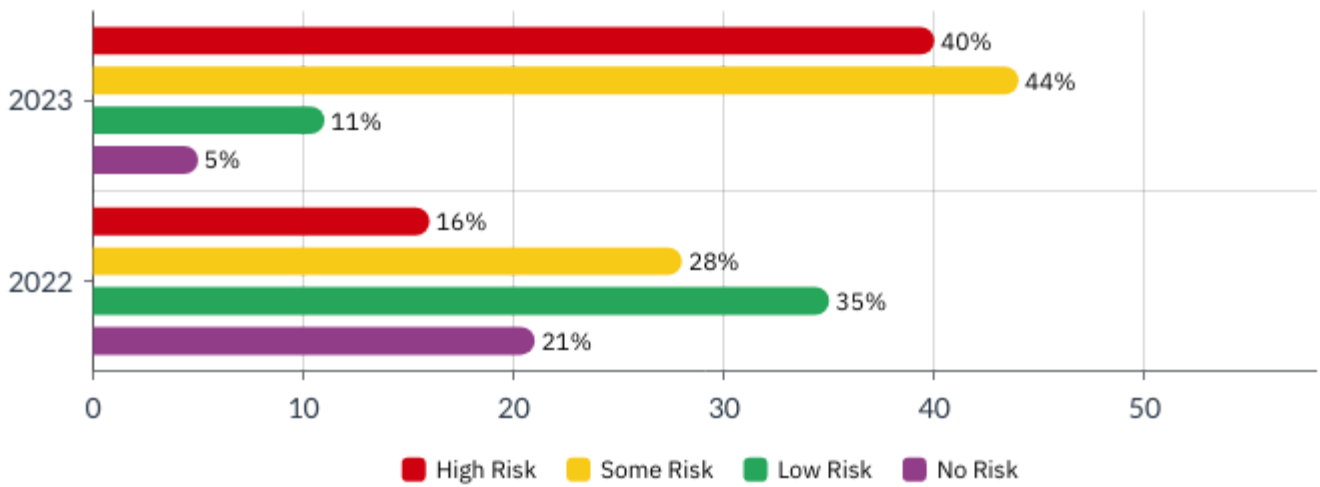


02. System breaking for users

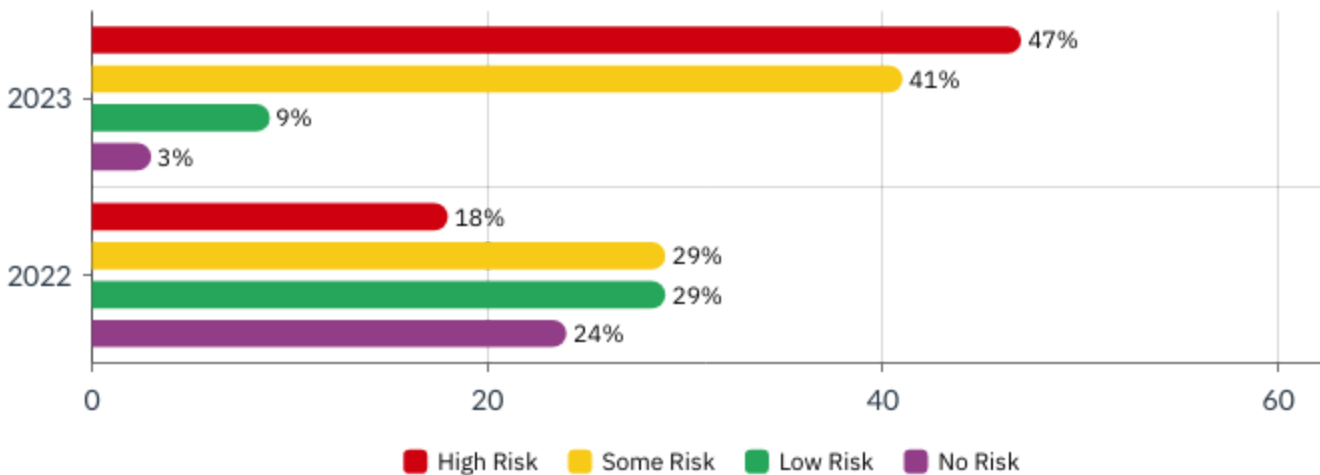


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03. Being an unsupported platform



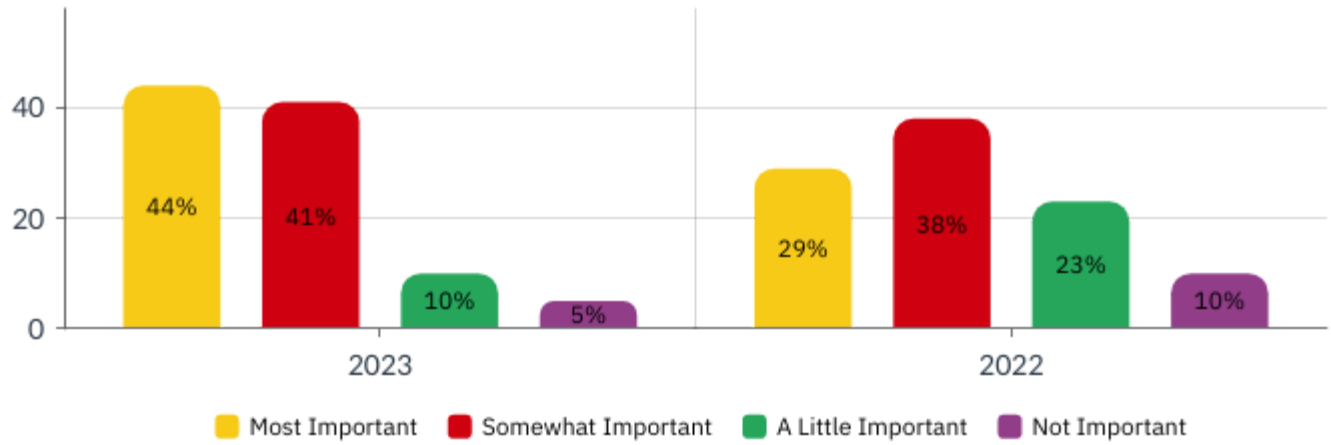
04. Security of system



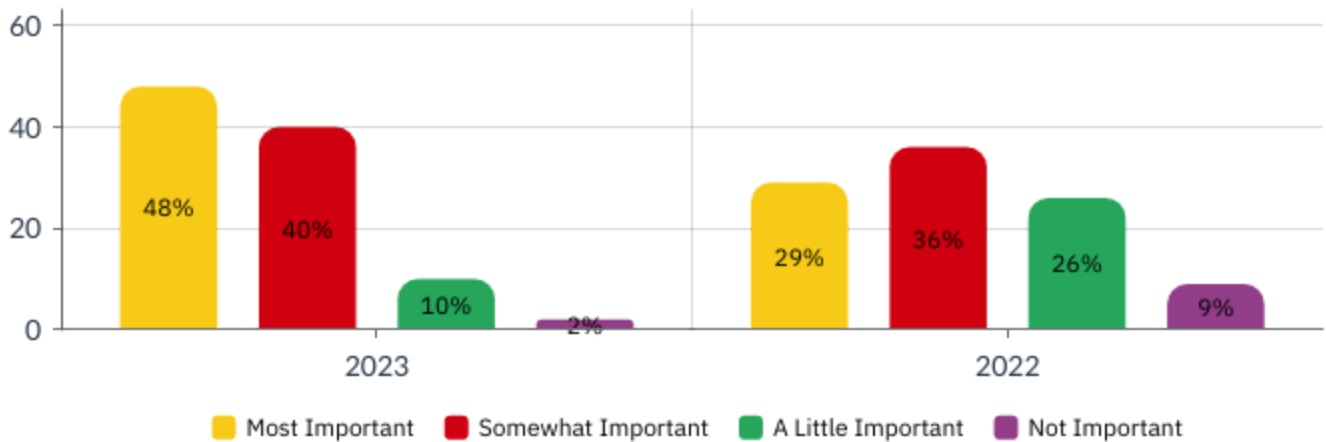
The comparison of potential risks faced by Legacy ASP/VB applications between 2022 and 2023 illustrates notable shifts in risk perceptions. In 2023, there's a significant increase in concerns regarding system breaking for users, elevating sharply from 16% to 43% in the high-risk category, accompanied by a decrease to 0% in the no-risk category. Similarly, the security of the system emerged as a heightened concern in 2023, with high-risk perceptions rising from 18% to 47%. Moreover, being an unsupported platform witnessed a substantial increase in high-risk perceptions, escalating from 16% to 40%. Conversely, risks related to incompatibility with OS and system updates remained unchanged with no reported risks in both years. This comparison emphasizes a notable rise in concerns about system stability, security, and being on an unsupported platform for ASP/VB applications in 2023, while risks regarding system updates and OS compatibility remained steady at no perceived risk levels.

Q5 What is most important to your business as you modernize your application ?

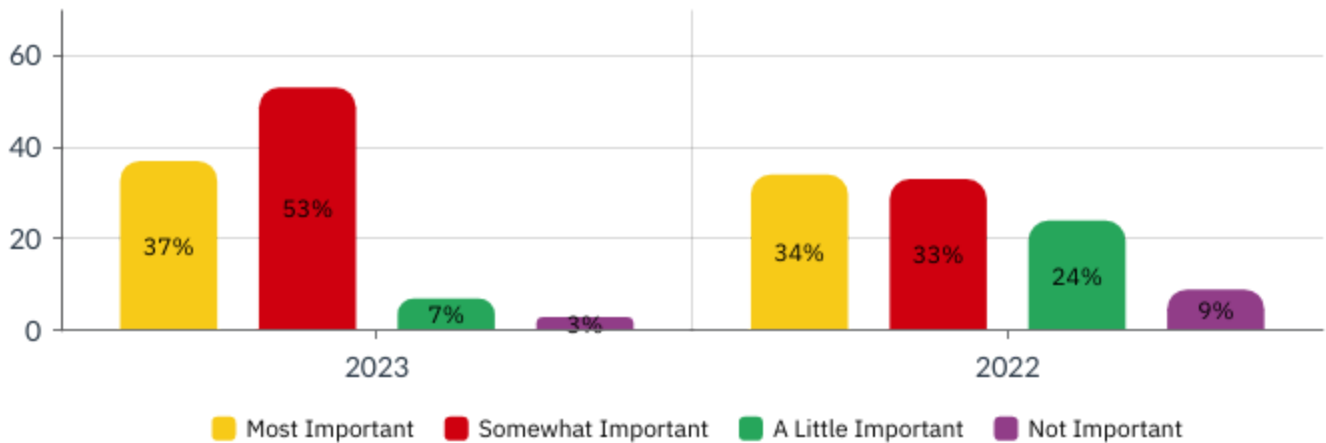
01. Being able to work in the cloud



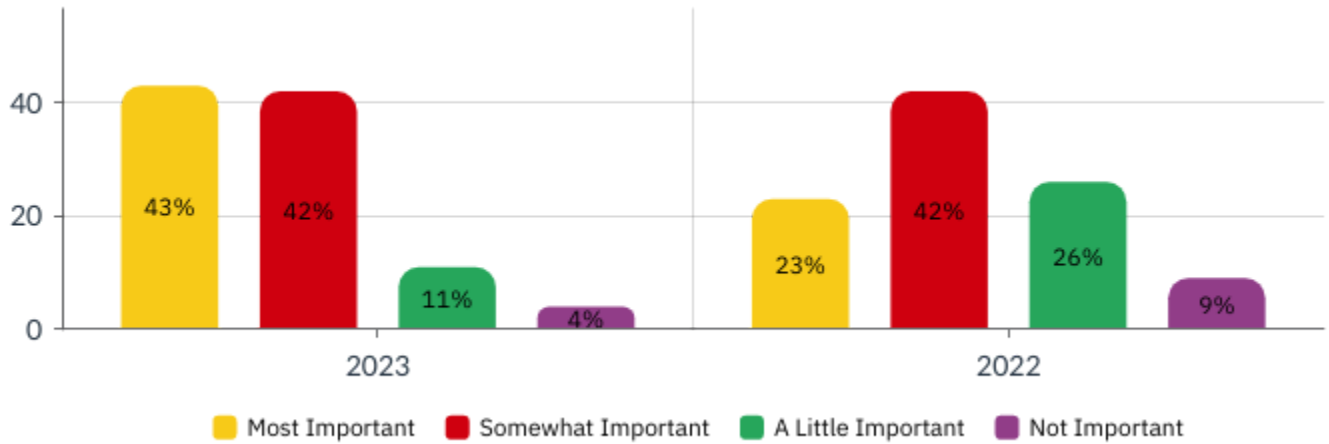
02. Improved security



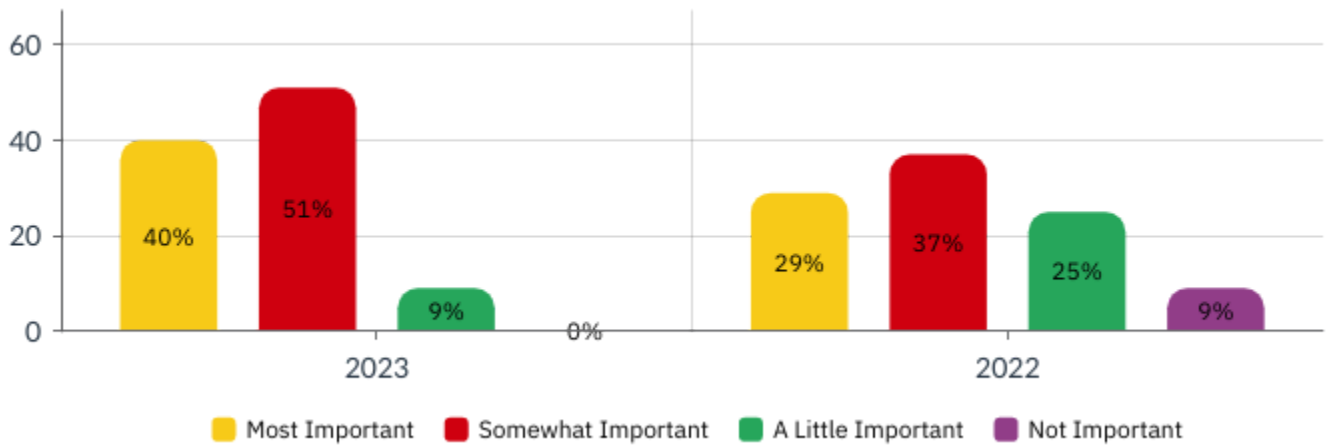
03. More flexibility



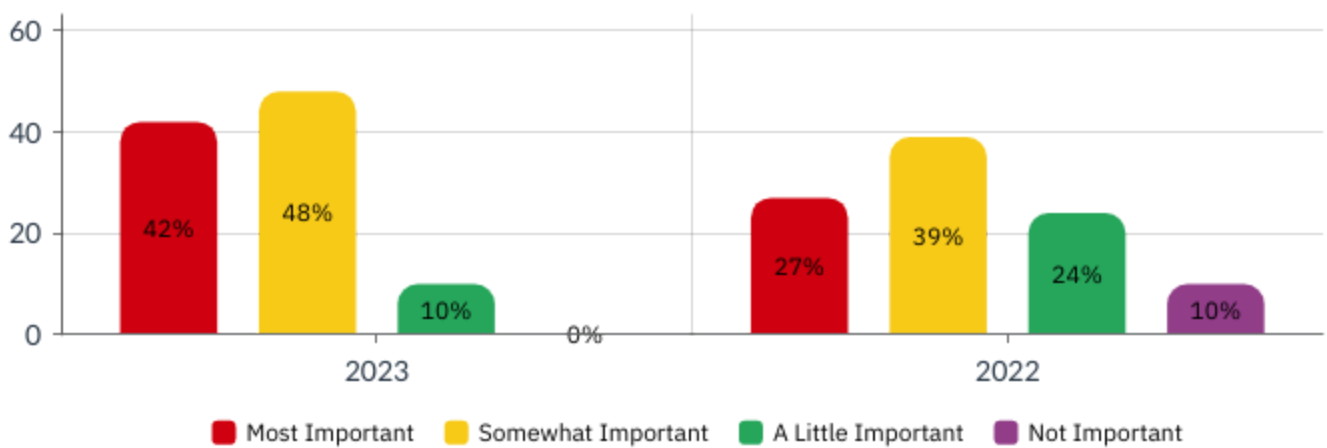
04. Enhanced reporting



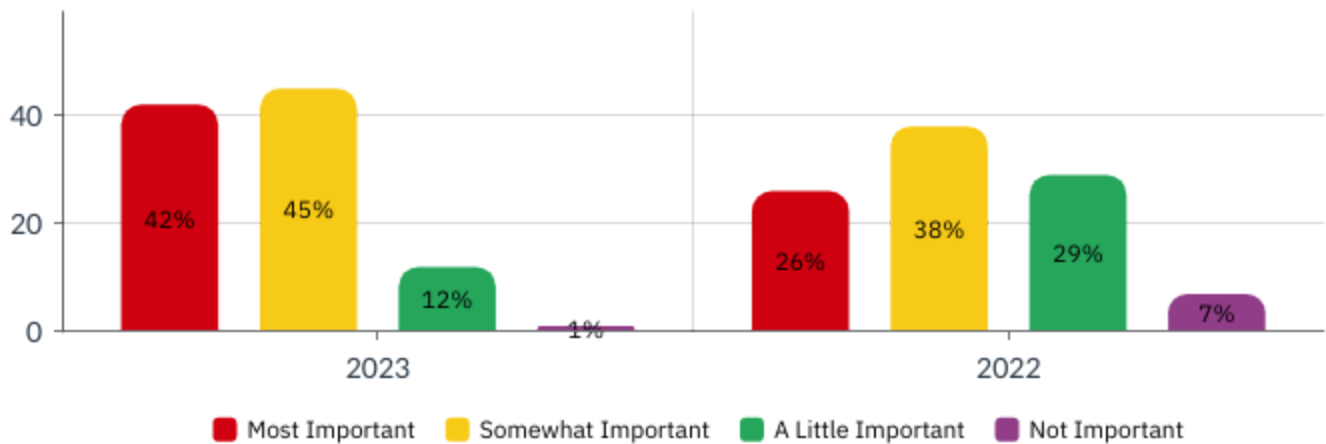
05. Scalability to support more users



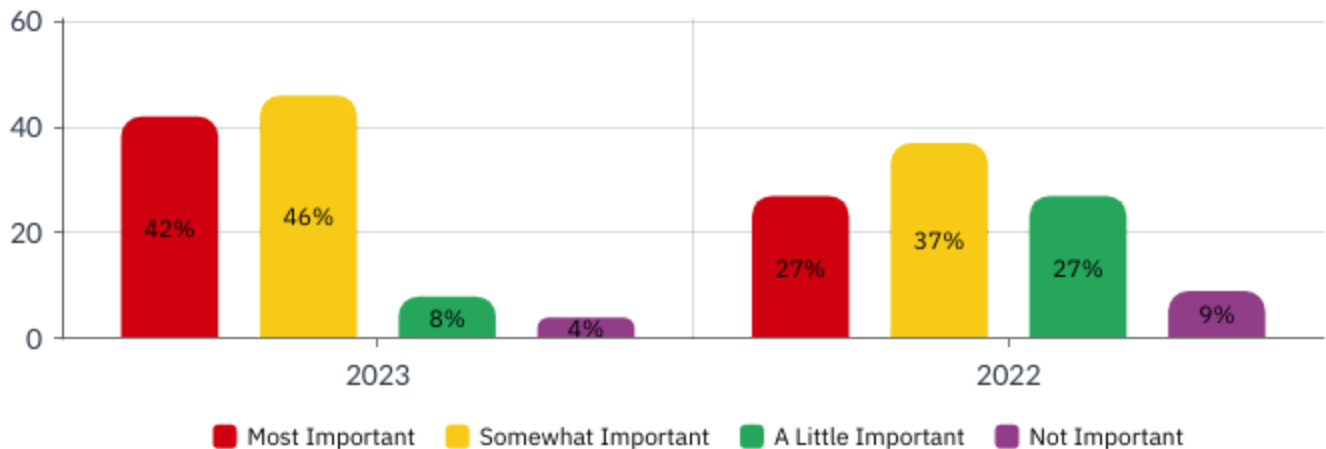
06. Modern user interface (UI/UX)



07. Implement new application features

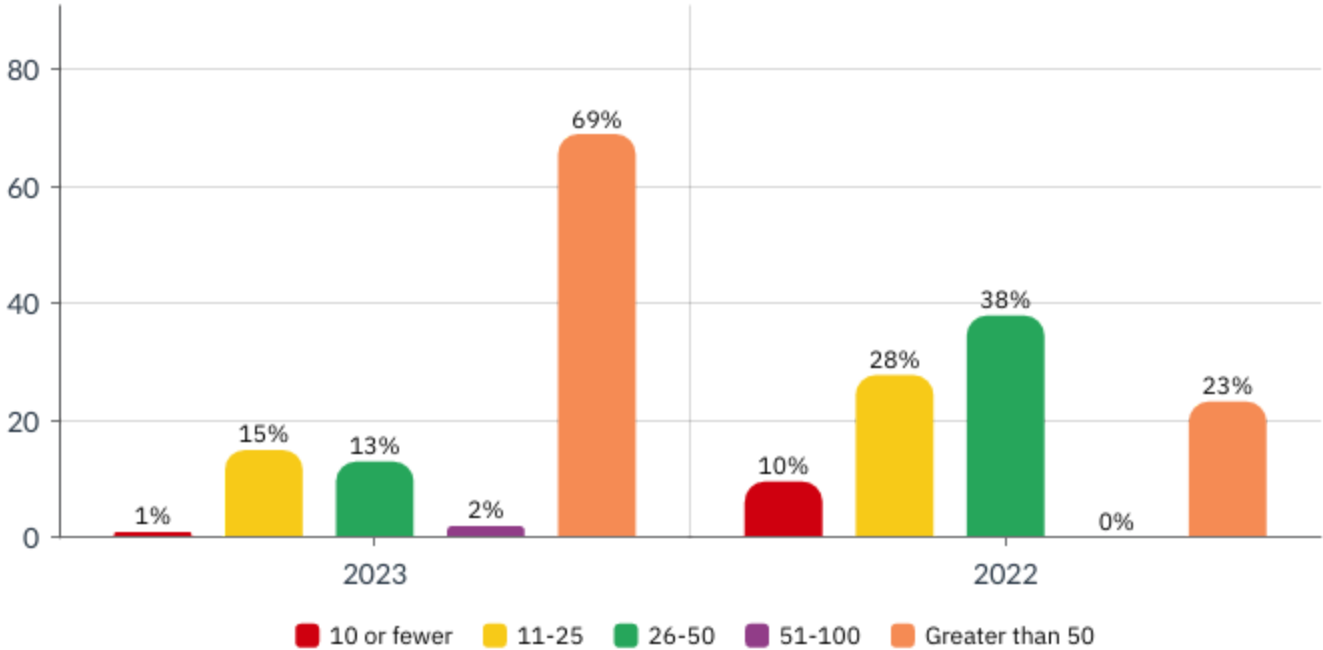


08. Change the application workflow



There's a significant uptick when compared to the previous year in the emphasis on cloud integration, security enhancement, scalability for user support, and improved reporting, all marked as most important priorities in 2023. Notably, there's an increase in the emphasis on improved security, marked as "Most Important," soaring from 29% to 48%. Similarly, enhanced reporting and scalability to support more users witnessed considerable rises in importance, jumping from 23% to 43% and from 29% to 40%, respectively. Additionally, there's a significant increase in the priority of implementing new application features and changing application workflow in 2023. Modern user interface (UI/UX) and implementing new application features also gained considerable importance. Conversely, while the cloud remains a critical factor, its importance slightly increased, with more focus on other aspects such as security, reporting, scalability, and feature enhancements in 2023 for application modernization efforts.

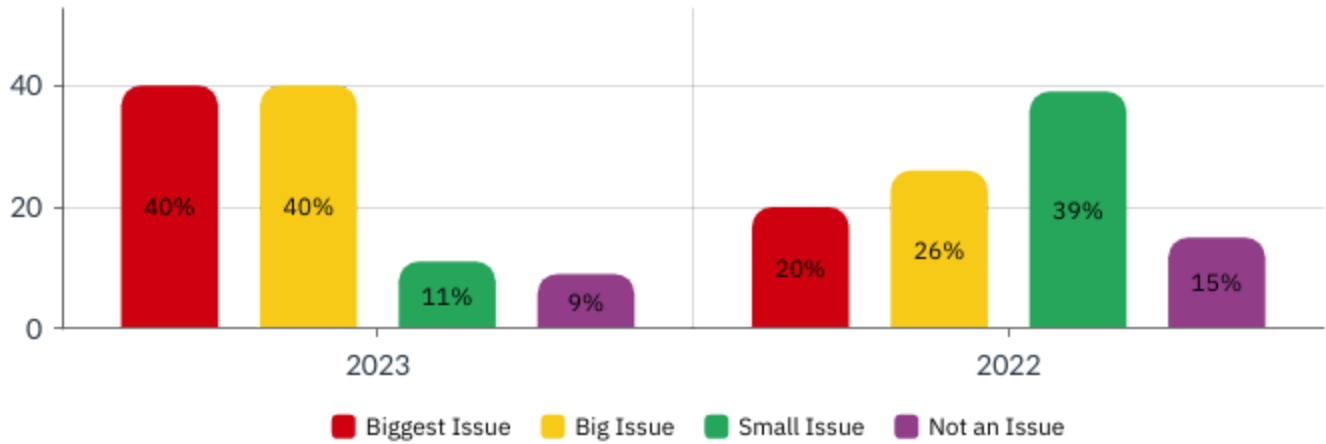
Q6 How many people are currently using the application?



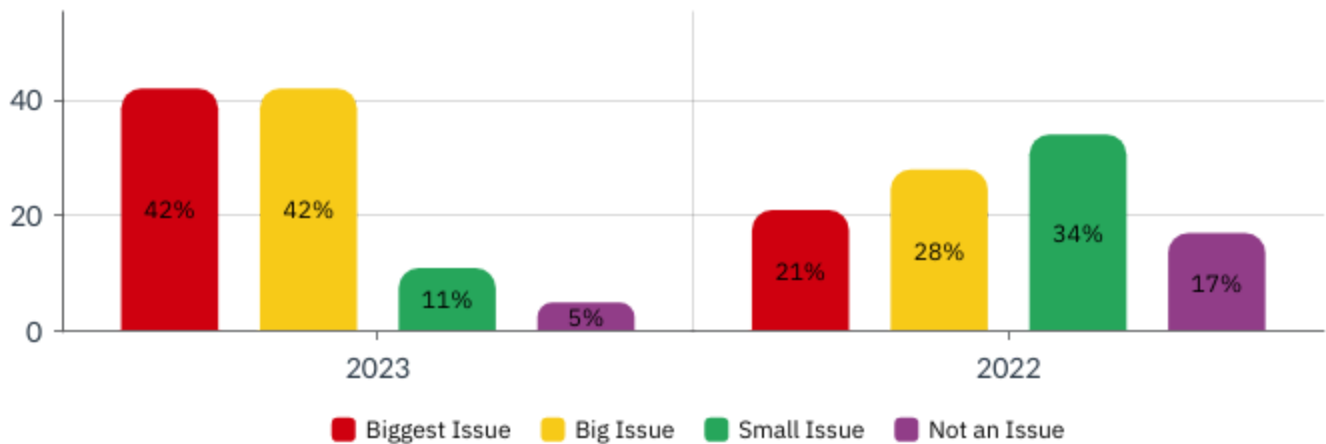
The 2023 survey has noted a substantial increase in the user base, particularly in the category of greater than 50 users, jumping significantly from 23.29% in 2022 to 69% in 2023. Conversely, smaller user groups, such as 10 or fewer, 11-25, and 26-50, experienced a decrease in representation in 2023. This comparison showcases a remarkable surge in the application's adoption among larger user groups in the latter year.

Q7 What is your biggest impediment to modernizing to a new platform?

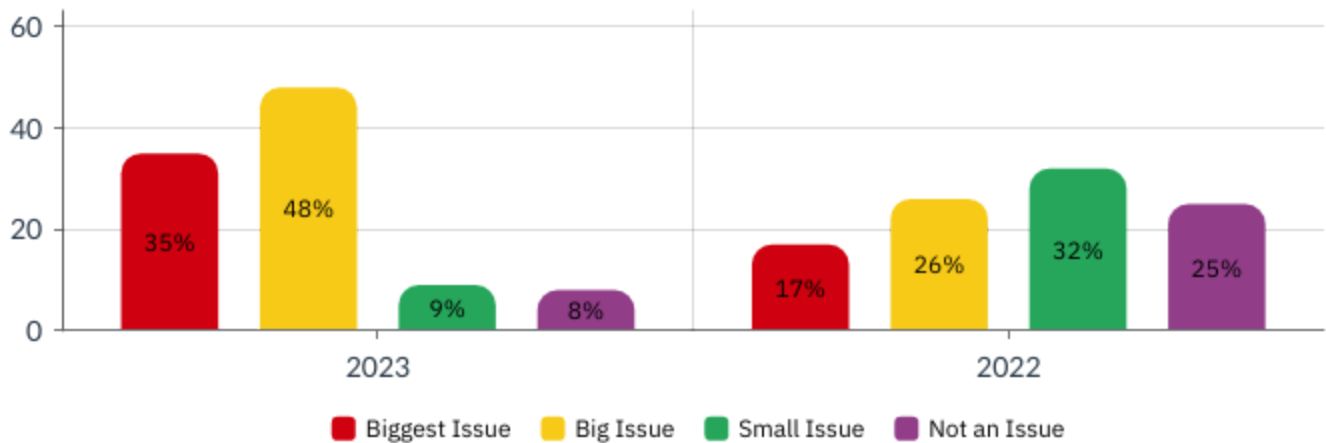
01. Time to do it



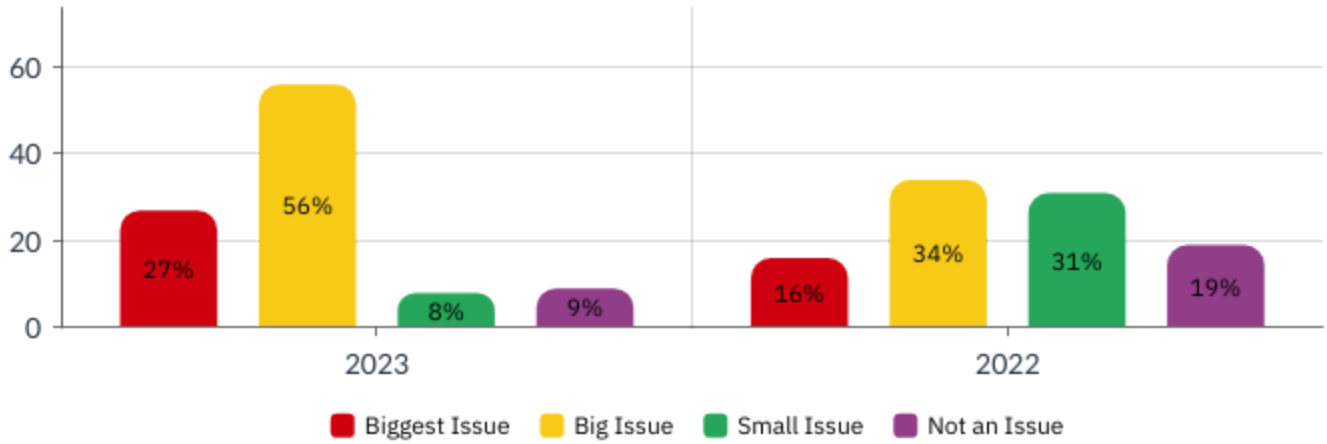
02. Not knowing what to go with



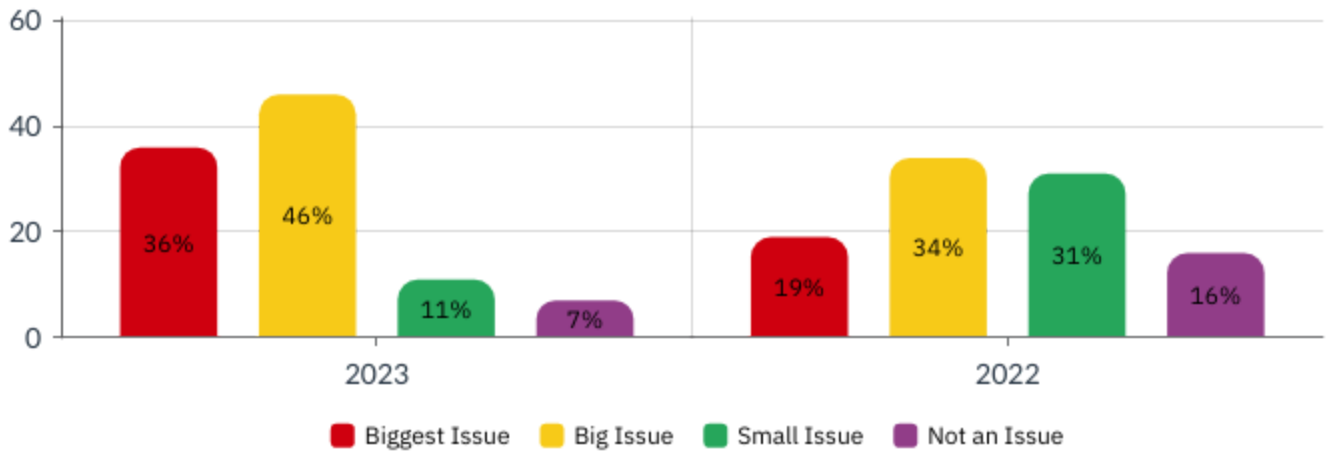
03. Lack of a budget for the project



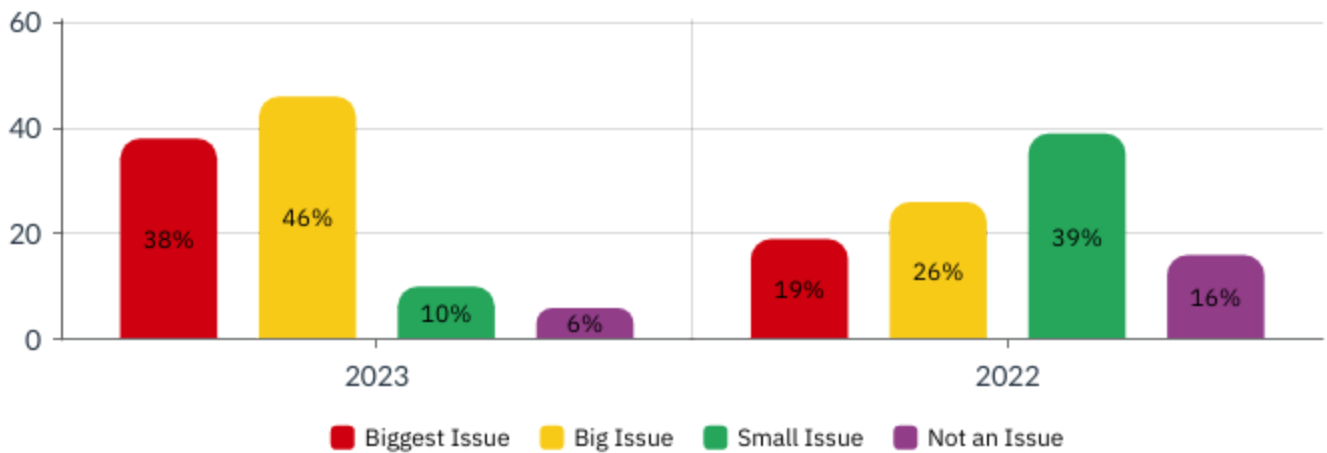
04. Unclear requirements



05. Change does not result in new revenue to the business

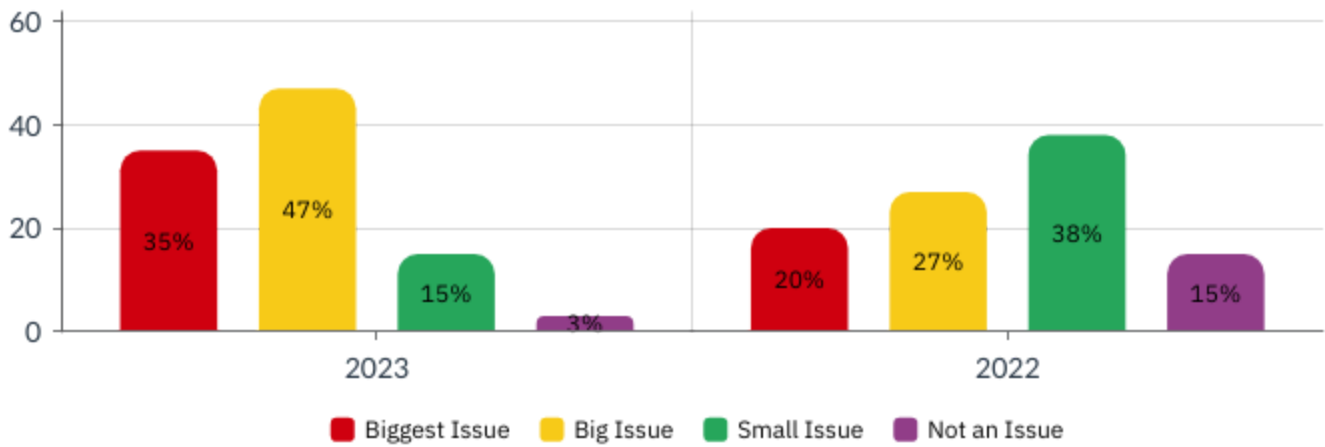


06. System performs fine now (if it's not broke don't fix it)



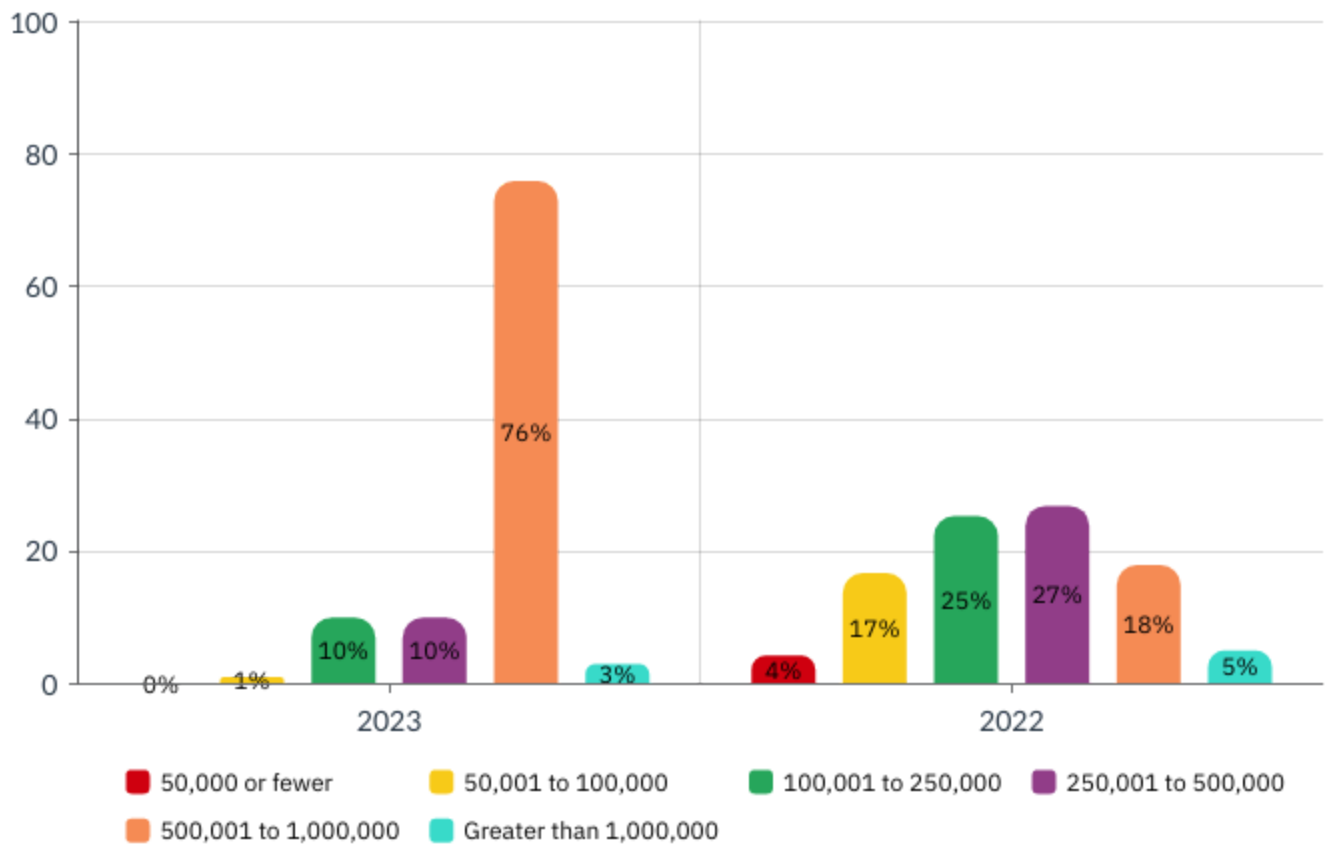
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07. Lack of business and technical documentation



Comparing the primary impediments to modernizing to a new platform between 2022 and 2023 demonstrates notable shifts in challenges faced. In 2023, there's a significant rise in concerns regarding the lack of a budget for the project, marked as a "Big Issue," escalating sharply from 26% to 48%. Similarly, unclear requirements and the absence of business and technical documentation emerged as significant hurdles, surging notably in 2023. Conversely, while challenges related to not knowing what platform to choose remained steady, concerns about time constraints, change not resulting in new revenue, and the system functioning adequately without requiring changes witnessed slight increases in their 'biggest issue' category. This comparison underscores a considerable increase in 2023 in budgetary constraints and clarity of requirements as major obstacles to modernization efforts compared to other challenges identified in 2022.

Q8 How big is the application in terms of number of lines of code?



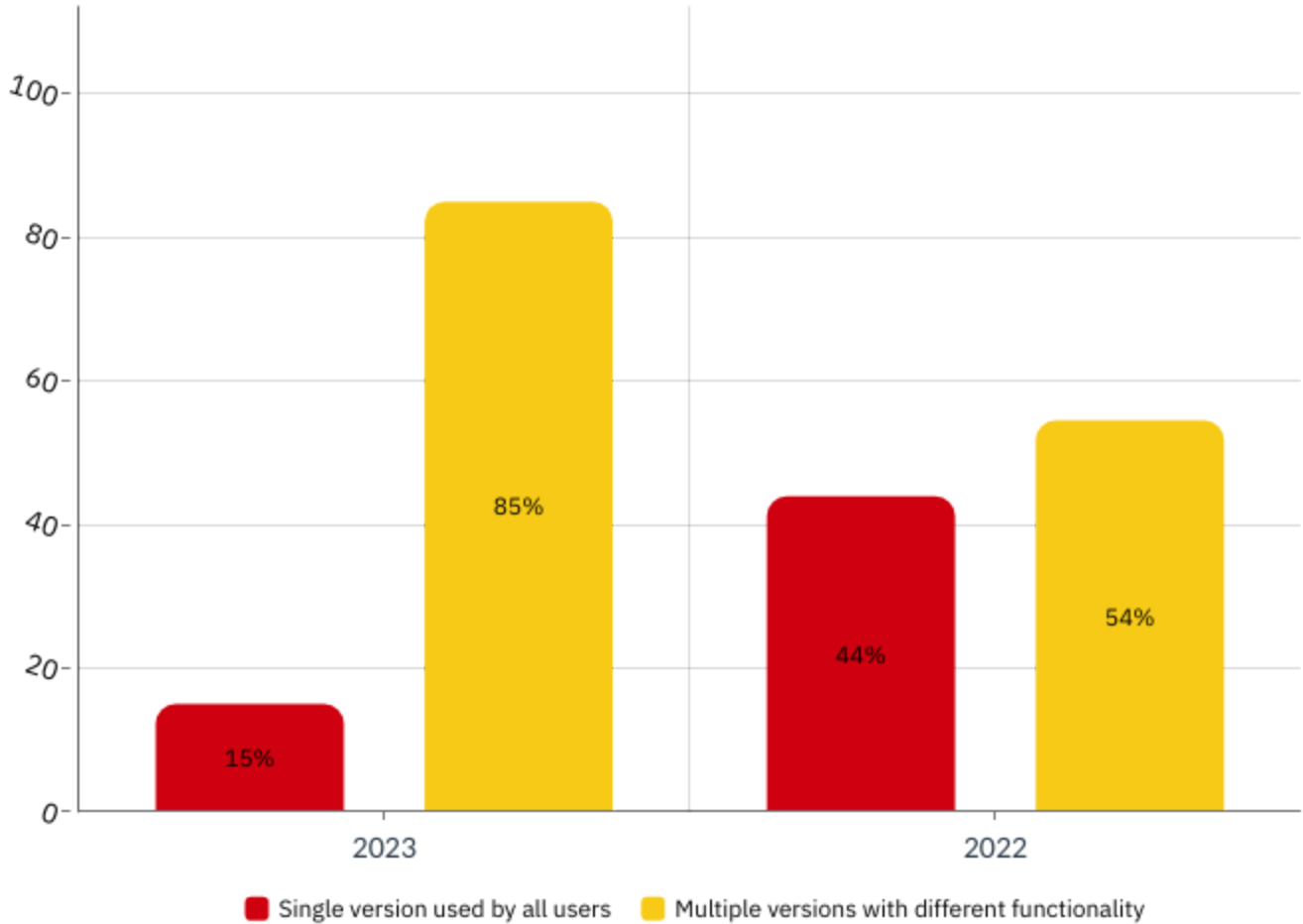
This year there was a significant surge in applications with 500,001 to 1,000,000 lines of code, skyrocketing from 17.93% to 76%. Conversely, smaller-sized applications decreased or remained negligible in representation. Applications within the 250,001 to 500,000 lines of code category also decreased notably from 26.90% to 10% in 2023. This shift highlights a substantial increase in larger-sized applications, particularly those within the half-million to million lines of code range, in 2023.

Q9 Have you ever begun the process to migrate your ASP/VB application?



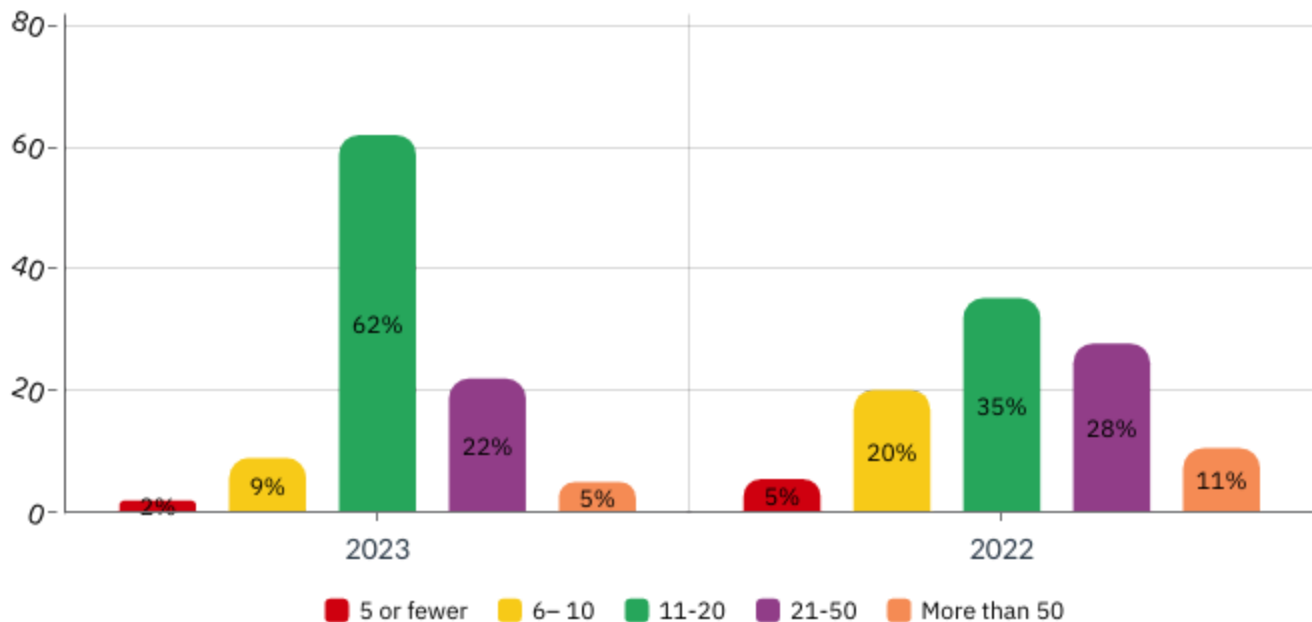
Completed full migrations surged from 19.30% to 62%, indicating significant success this year. Meanwhile, exploration without project initiation dropped notably from 18.13% to 4%. Partial migration attempts, including selected module completion and database migration without application migration, also decreased. Additionally, starting migrations and abandoning them before completion decreased. This comparison highlights a remarkable increase in successfully finished full migrations in 2023, signaling reduced exploration and partial attempts.

Q10 Do you have a single instance/version of your application or multiple customized versions per client?



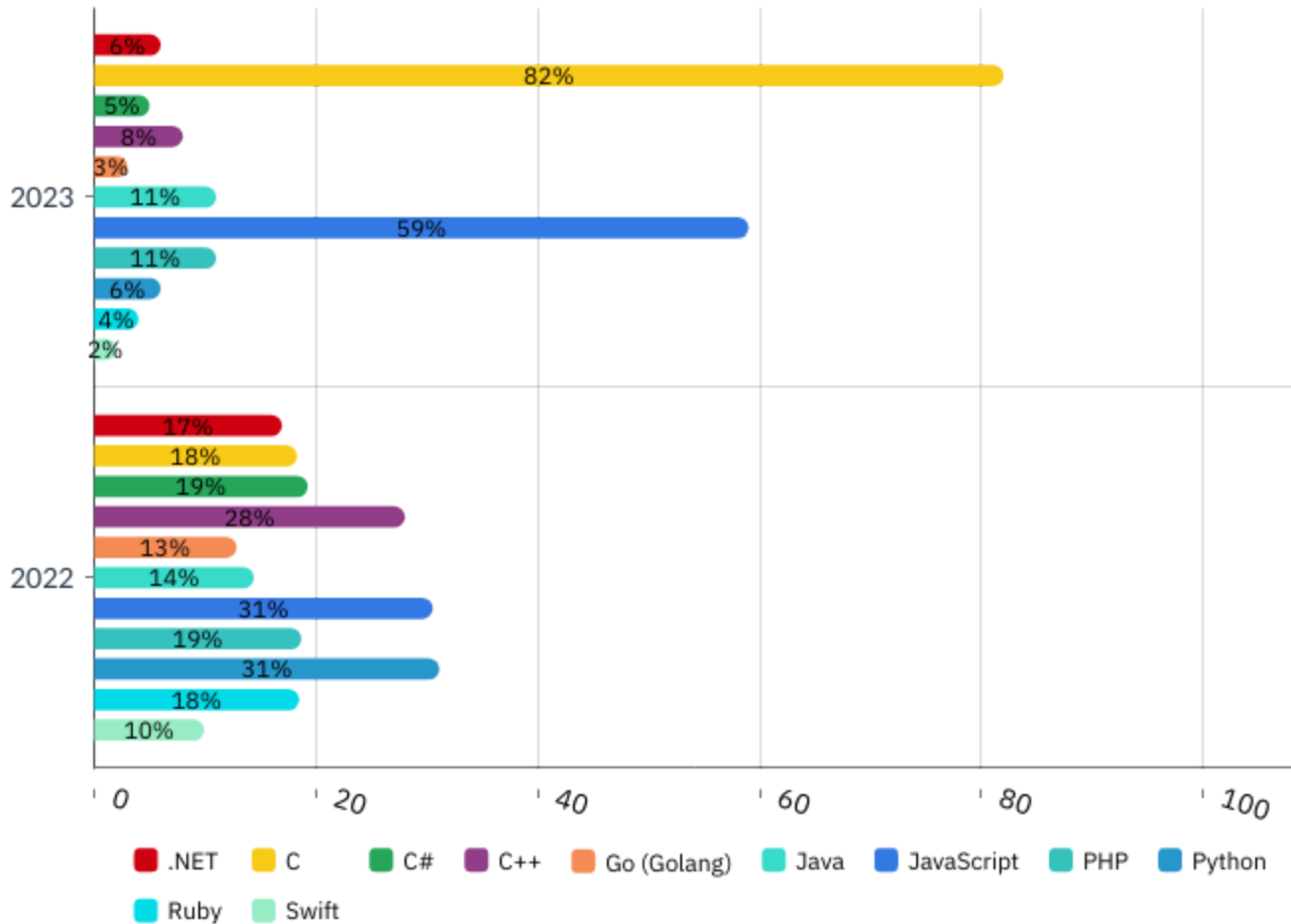
In 2023, there's a remarkable shift towards multiple customized versions per client, surging from 54.49% to 85%. Conversely, the usage of a single version by all users decreased notably from 43.95% to 15%. This comparison underscores a substantial increase in the adoption of customized versions catering to different client functionalities, signifying a shift away from a single, uniform application across all users.

Q11 How many people are part of your in-house development staff, including both employees and contractors



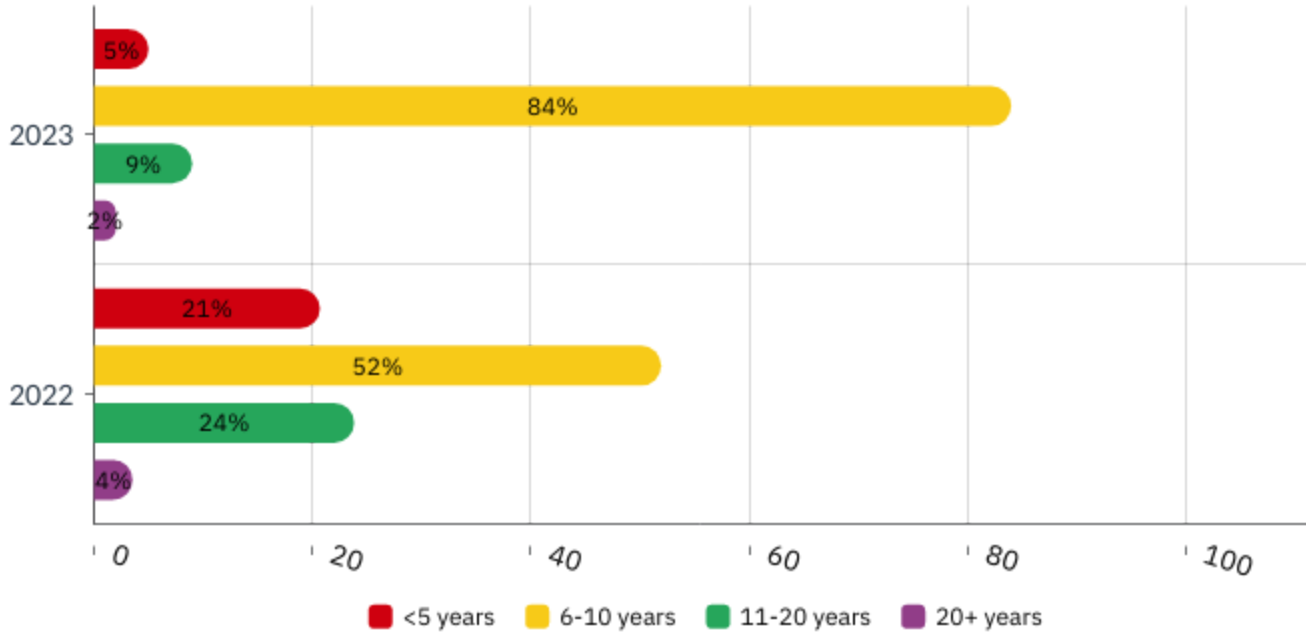
Comparing the in-house development staff size shows a substantial increase in the category of 11-20 staff members, rising significantly from 35.23% last year to 62% in 2023. Conversely, smaller teams with 5 or fewer and those ranging from 6-10 employees or contractors decreased notably. The groups comprising 21-50 members also experienced a slight decrease from 27.79% to 22%. Additionally, teams with more than 50 members decreased from 10.57% to 5% in 2023. This comparison indicates a significant rise in mid-sized development teams (11-20 members) and a decrease in smaller and larger team sizes from 2022 to 2023.

Q12 What languages does your team develop in (for your company) besides ASP/VB? (check all that apply)



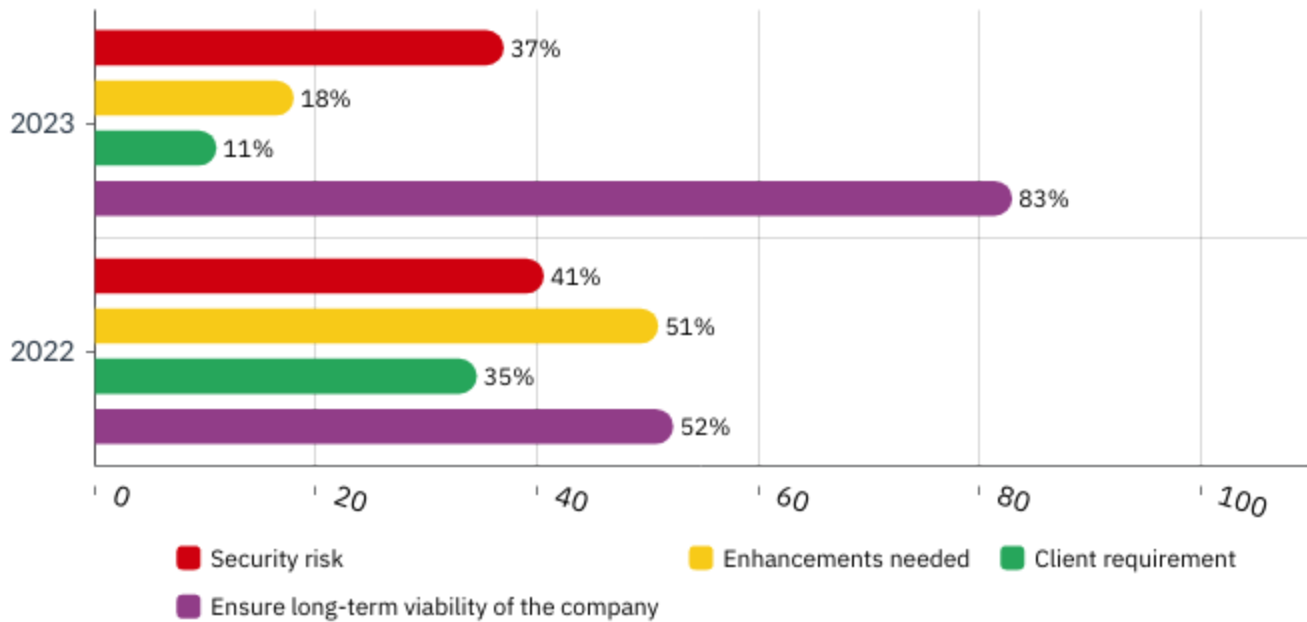
There has been a significant change in the programming languages utilized by development teams for company projects. In 2023, there were notable decreases in the usage of several languages, including .NET, C#, Go (Golang), Python, Ruby, and Swift. However, JavaScript saw a substantial increase, rising from 30.54% to 59% this year. Moreover, C and C++ experienced substantial spikes, surging from 18.29% to 82% and from 28.02% to 8%, respectively. Java and PHP remained relatively stable, with slight changes noted. This comparison underscores a significant shift in language preference, with increased reliance on C, C++, and JavaScript while other languages witnessed decreased utilization during 2023.

Q13 How many years have you been using your ASP/VB application?



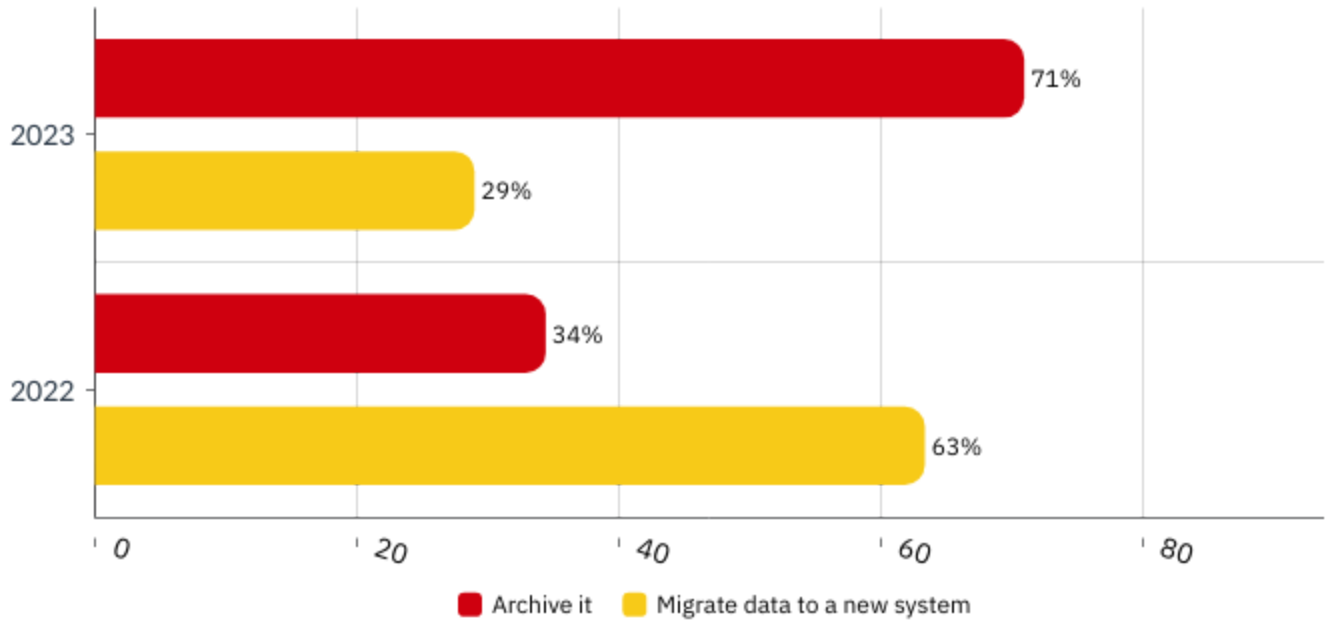
The duration of ASP/VB application usage has seen a substantial increase in the usage duration, especially in the 6-10 years category, skyrocketing from 51.95% to 84% in 2023. Conversely, shorter durations of fewer than 5 years decreased notably from 20.70% to 5%. Additionally, longer-term usage of 11-20 years witnessed a decrease from 23.83% to 9%, while the application's usage for over 20 years slightly decreased from 3.52% to 2%. This comparison highlights a major increase in the mid-range duration of 6-10 years of ASP/VB application use from 2022 to 2023, accompanied by declines in both shorter and longer-term usage durations.

Q14 What would cause you to begin a migration/modernization? (select all that apply)



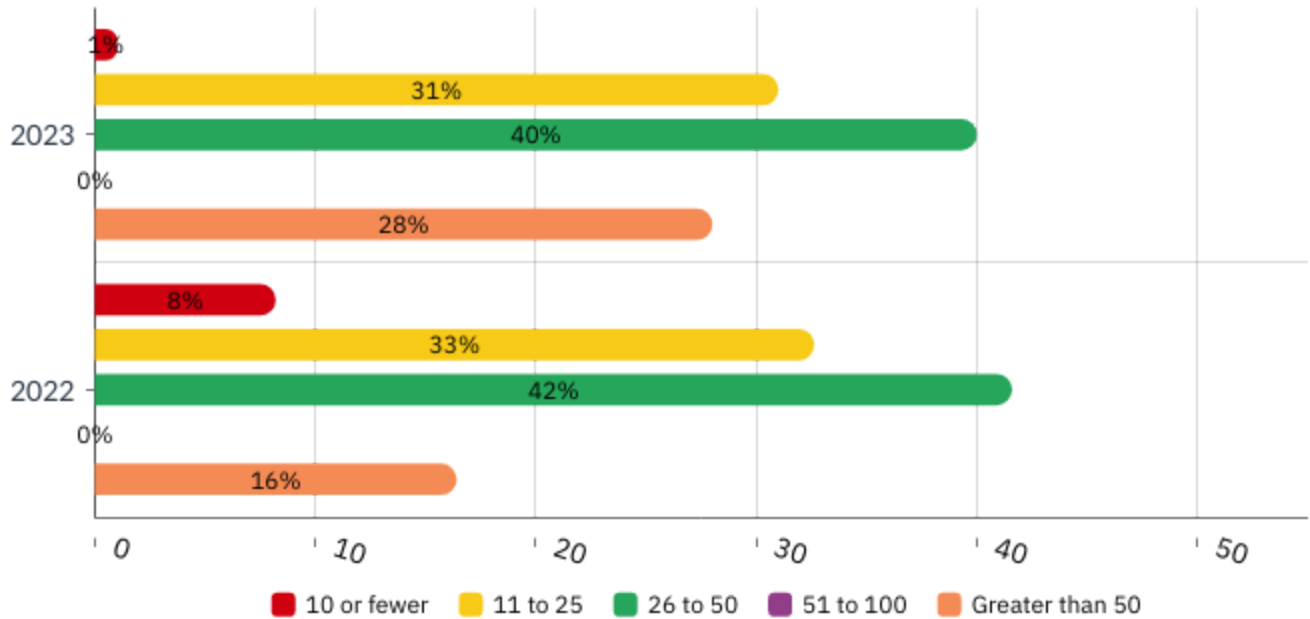
The factors triggering migration or modernization decisions have seen a notable rise as observed in the need to ensure the long-term viability of the company as a reason to initiate migration or modernization, escalating sharply from 52.34% to 83% in 2023. Conversely, factors such as enhancements needed, and client requirements witnessed significant decreases. The need due to security risks also slightly decreased from 40.63% to 37%. This comparison underscores a significant surge in prioritizing the long-term sustainability of the company as a driving force behind migration or modernization decisions in 2023, accompanied by declines in other influencing factors.

Q15 What would you do with your current old system data if you moved to a new platform?



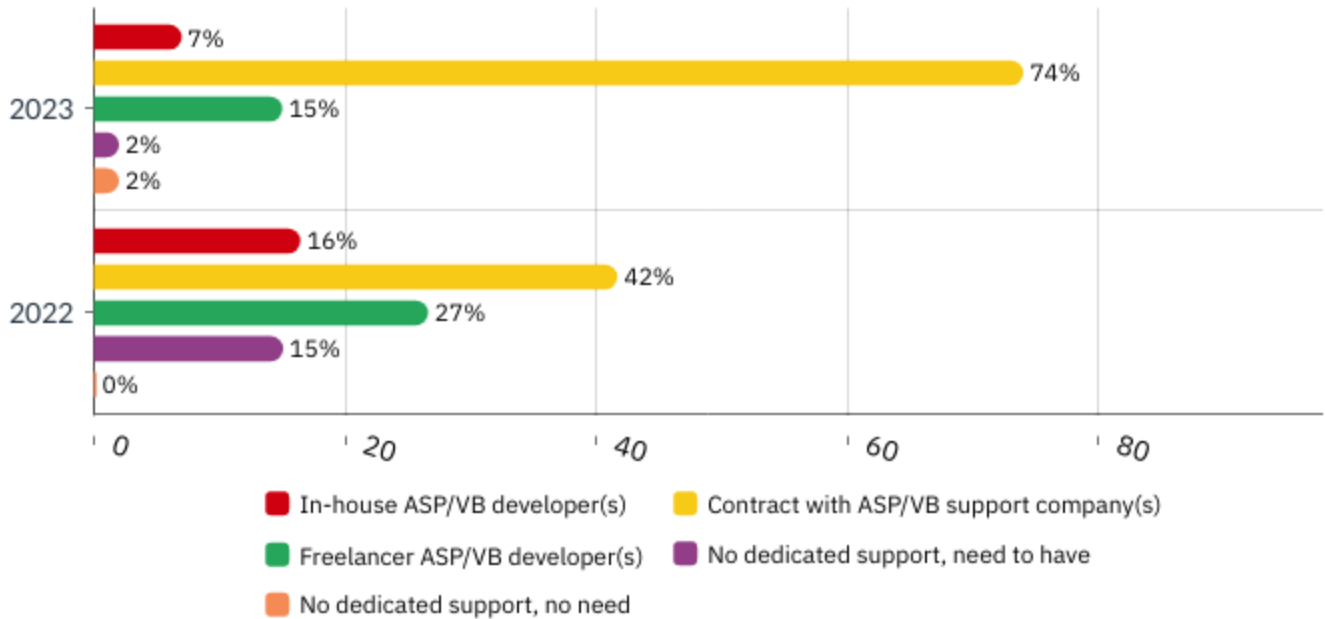
The plans for handling old system data upon transitioning to a new platform have seen a significant shift as there's a remarkable increase in the intention to archive the old system data, soaring from 34.44% to 71% during 2023. Conversely, the inclination to migrate data to the new system decreased notably from 63.41% to 29%. This comparison highlights a substantial preference in 2023 to archive rather than migrate old system data upon transitioning to a new platform, marking a significant shift in data handling strategies.

Q16 How big is the application in terms of number of screens?



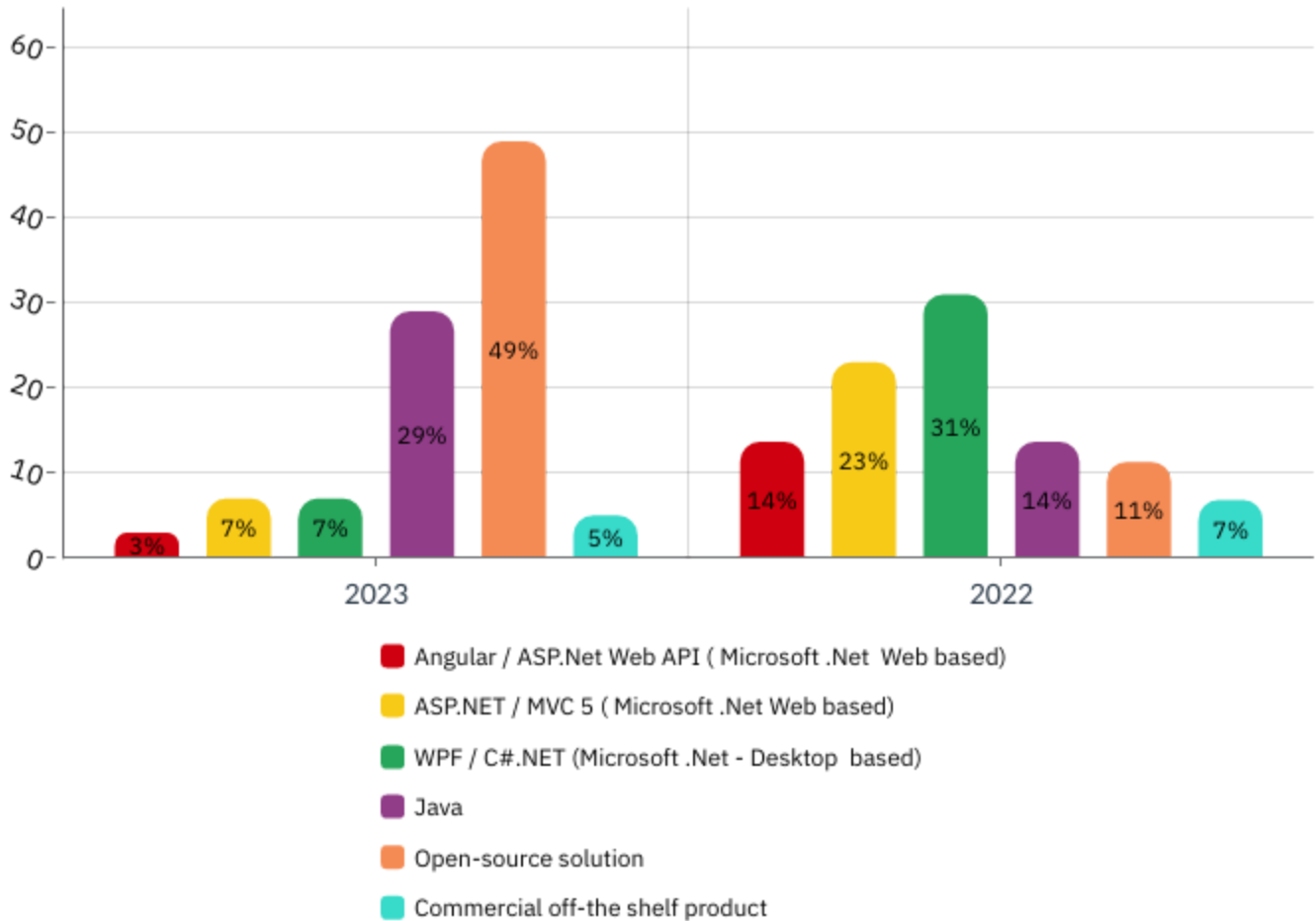
Comparing the size of the Legacy ASP/VB6 application in terms of the number of screens between 2022 and 2023 shows slight changes. In 2023, applications with 10 or fewer screens saw a notable decrease from 8.20% to 1%. Similarly, applications with greater than 50 screens increased from 16.41% to 28%. However, the distribution among categories ranging from 11 to 50 screens remained relatively stable, indicating that while smaller applications reduced, larger ones witnessed a moderate increase during 2023.

Q17 Do you have a current ASP/VB Developer(s) to support the application?



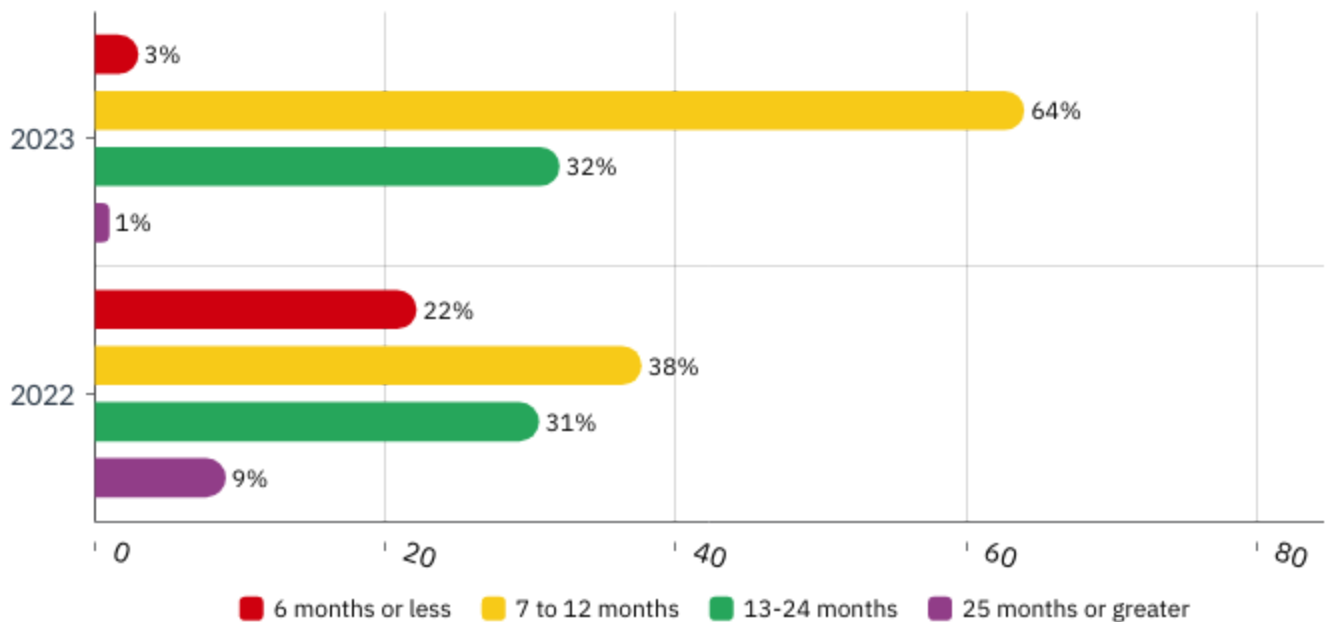
The availability of ASP/VB developer support for applications has seen a significant rise in contracting with ASP/VB support companies, soaring from 41.68% to 74% in 2023. Conversely, the presence of in-house ASP/VB developers decreased notably from 16.44% to 7%, and freelancers supporting ASP/VB applications declined from 26.61% to 15%. Moreover, the segment with no dedicated support needing to have it, and those with no need for dedicated support increased slightly to 2% each. This comparison highlights a significant shift towards outsourcing ASP/VB support to external companies, accompanied by decreases in in-house and freelance support for ASP/VB applications in 2023.

Q18 What would be the ideal target platform for the application?



The ideal target platform for applications highlights a substantial rise in favoring open-source solutions, escalating sharply from 11.31% to 49% in 2023. Conversely, preferences for WPF/C#.NET and ASP.NET/MVC 5 decreased notably, each dropping from around 30-23% to 7%. Java also saw a substantial increase in preference, rising from 13.65% to 29%. Commercial off-the-shelf products and Angular/ASP.Net Web API showed minimal changes. This comparison underscores a significant shift in 2023 towards favoring open-source solutions and Java as ideal target platforms, while preferences for Microsoft-based technologies declined.

Q19 Once started, what is your expected time frame to complete a migration?



The expected time frame to complete a migration once started demonstrates a notable surge in the expectation to complete migrations within 7 to 12 months, escalating sharply from 37.65% to 64% in 2023. Contrarily, projections for shorter durations of 6 months or less decreased considerably from 22.16% to 3%. The 13-24 months category witnessed a slight increase from 30.59% to 32%, while expectations for migrations exceeding 25 months diminished from 9.02% to 1%. This comparison indicates a notable shift in 2023 towards aiming for more expedited migration completion within 7 to 12 months, while shorter and longer durations saw significant declines in projections.

Q20 Describe any problem you've experienced with ASP/VB6; or suggest other key points that were missed in this survey.

- 1. Outdated ActiveX Components in VB6:** Customers express concerns about the age of ActiveX components in VB6, highlighting that building new components is both complex and error-prone. This raises worries about the efficiency and reliability of their applications, with potential implications for overall performance.
- 2. Security Vulnerabilities in ASP/VB6:** The vulnerability of ASP/VB6 to SQL injection and cross-site scripting attacks is a significant worry for customers. The presence of security vulnerabilities in these technologies poses a direct threat to the integrity of their applications, potentially exposing sensitive data to unauthorized access.
- 3. Lack of Support for New Web Standards:** Customers are troubled by the fact that ASP/VB6 does not support new web standards such as HTML5 and CSS3. This limitation hinders their ability to create modern and visually appealing web applications, putting them at a disadvantage in a rapidly evolving digital landscape.
- 4. Short Technology Life Cycle:** The short technology life cycle of ASP/VB6 is a notable concern. Customers are aware that these technologies have been replaced by ASP.NET and VB.NET, signaling potential obsolescence. This raises questions about the long-term viability of their current applications and the need for migration to newer platforms.
- 5. Issues with VB6 Integrated Development Environment (IDE):** The multitude of problems and defects in the VB6 Integrated Development Environment (IDE) is a frustration for customers. This negatively impacts the development process, leading to concerns about increased debugging efforts, slower development cycles, and potential compatibility issues.
- 6. Application Stability and Bugs:** Customers are troubled by the reported instability of applications developed using ASP/VB6, which are prone to bugs and crashes. This creates apprehension about the reliability of their software and its ability to provide a seamless user experience without disruptions.
- 7. Lack of Support for New Technologies:** Concerns arise from the potential lack of support and integration for new technologies in ASP/VB6. This poses a challenge for developers who may find it difficult to seamlessly integrate their applications with the latest tools and technologies, potentially hindering innovation and feature enhancements.
- 8. Long-Term Security Risks:** Customers worry about the long-term security risks associated with the prolonged use of ASP and VB6. The aging nature of these programming technologies may introduce security vulnerabilities that hackers could exploit to compromise their applications and sensitive data.
- 9. Compatibility Issues with Latest Operating Systems:** Compatibility issues with the latest operating systems are a significant concern for customers. The use of older programming technologies like ASP and VB6 may lead to difficulties in ensuring smooth functionality on modern platforms, potentially affecting the user experience and overall application performance.
- 10. DAS and Sage 300 ERP Macros:** While not explicitly mentioned as a concern, customers may also express worries about the limited functionality and adaptability of very small macros developed for Sage 300 ERP in the context of technological advancements and evolving business needs. They might seek assurances regarding the long-term viability and support for these specific macros.

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