

## Database Trends Survey Report

Embarcadero Technologies

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# DATABASE SURVEY

The Embarcadero Database Survey was conducted in third quarter 2010 and encompasses responses from a wide array of database professionals worldwide. The purpose of the survey was to collect information about the top database trends, challenges, key initiatives, and current tools being used.

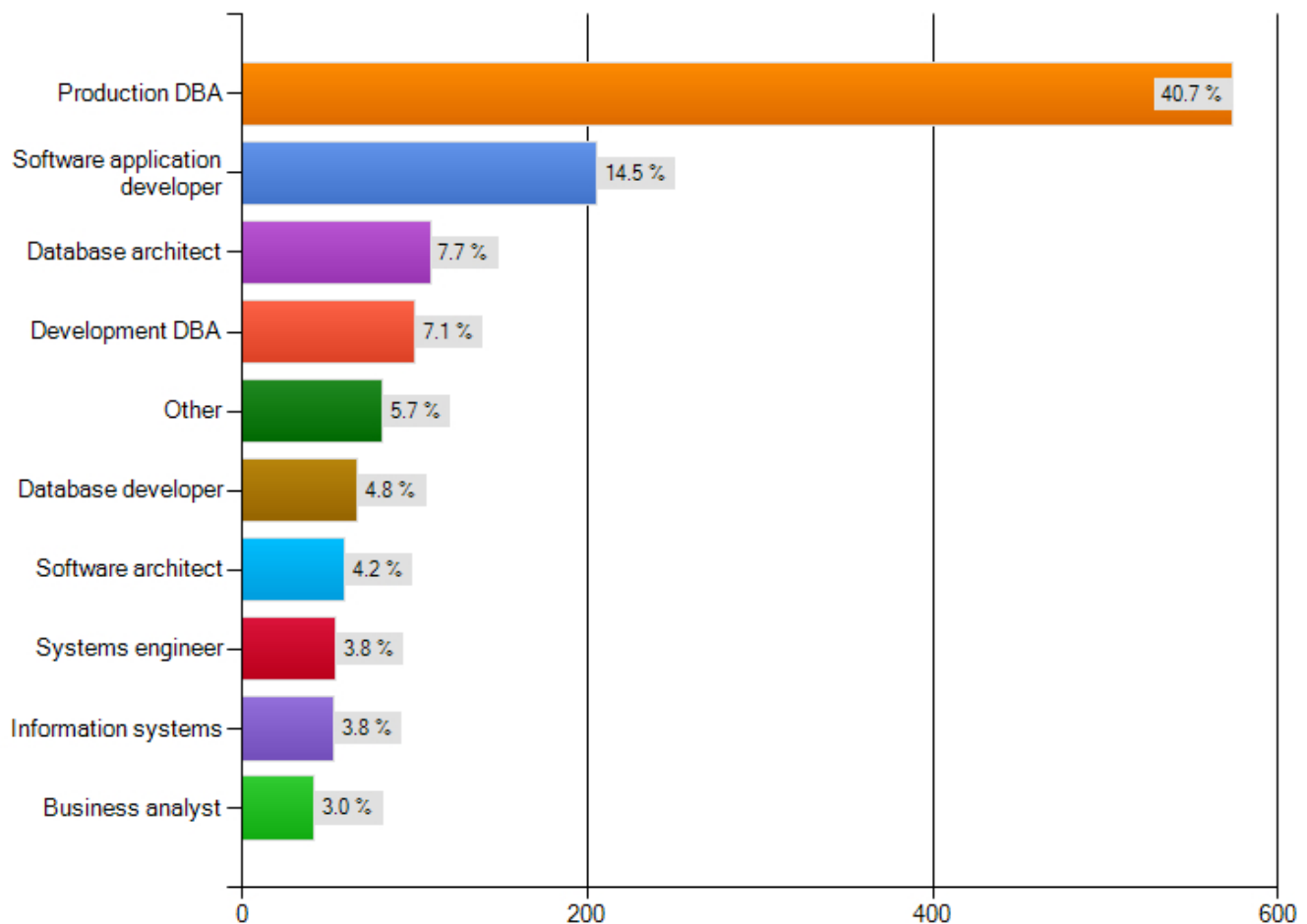
## METHODOLOGY

A total of 1230 responses were received during the web-based survey, which was open in Q3 2010. Respondents were not required to answer all of the questions to complete the survey, and many questions allowed for multiple answers. The survey respondents were primarily database professionals, with most reportedly from organizations that have more than 1,000 employees and are worth more than \$1 billion.

## Profile of Survey Respondents

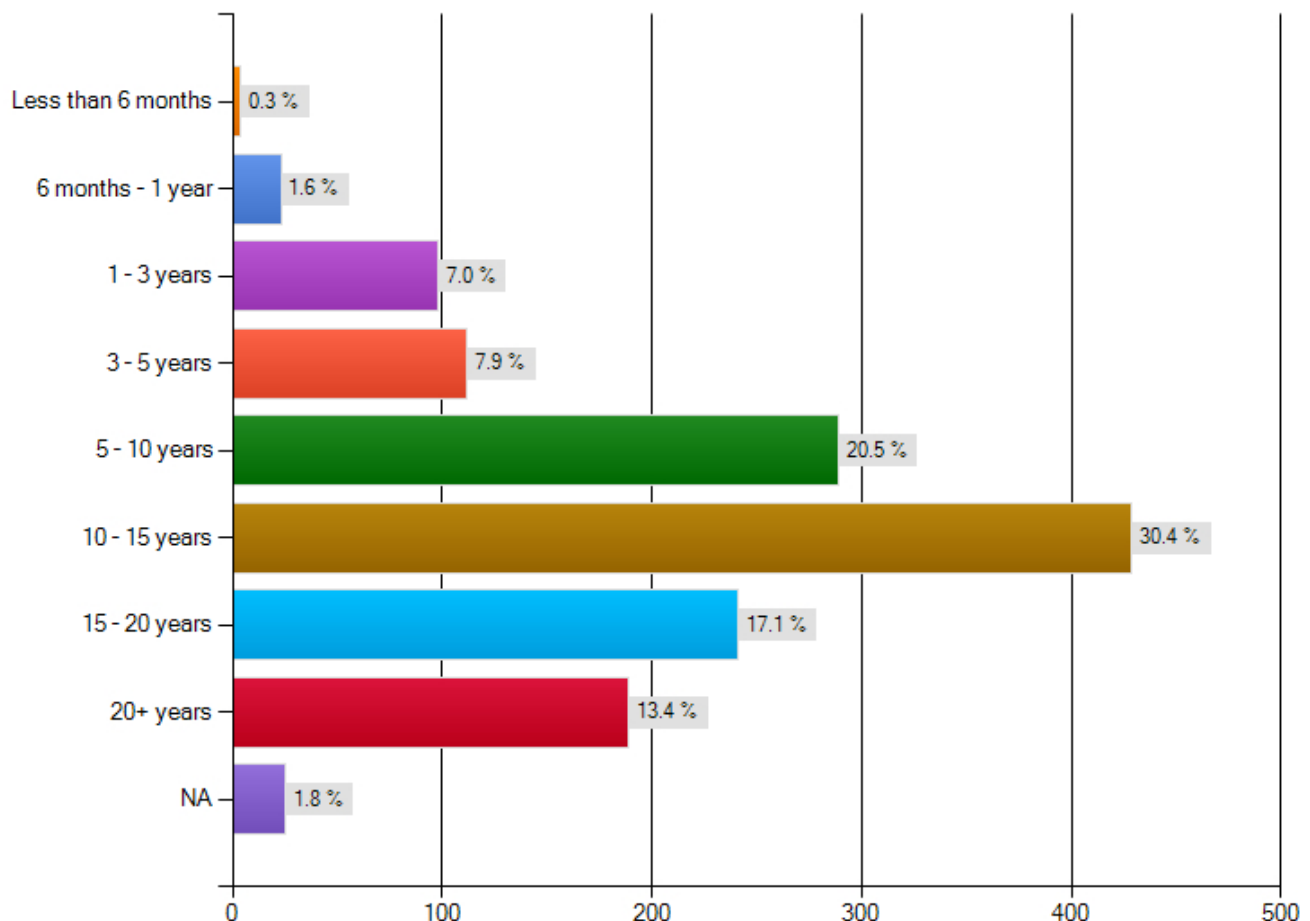
The largest group of respondents - 48% - identified themselves as database administrators (DBAs), with 41% production DBAs and 7% development DBAs. Nearly 15% of respondents were software application developments, followed by database architects (8%), database developers (5%) and software architects (4%).

**What is your role within your organization?**



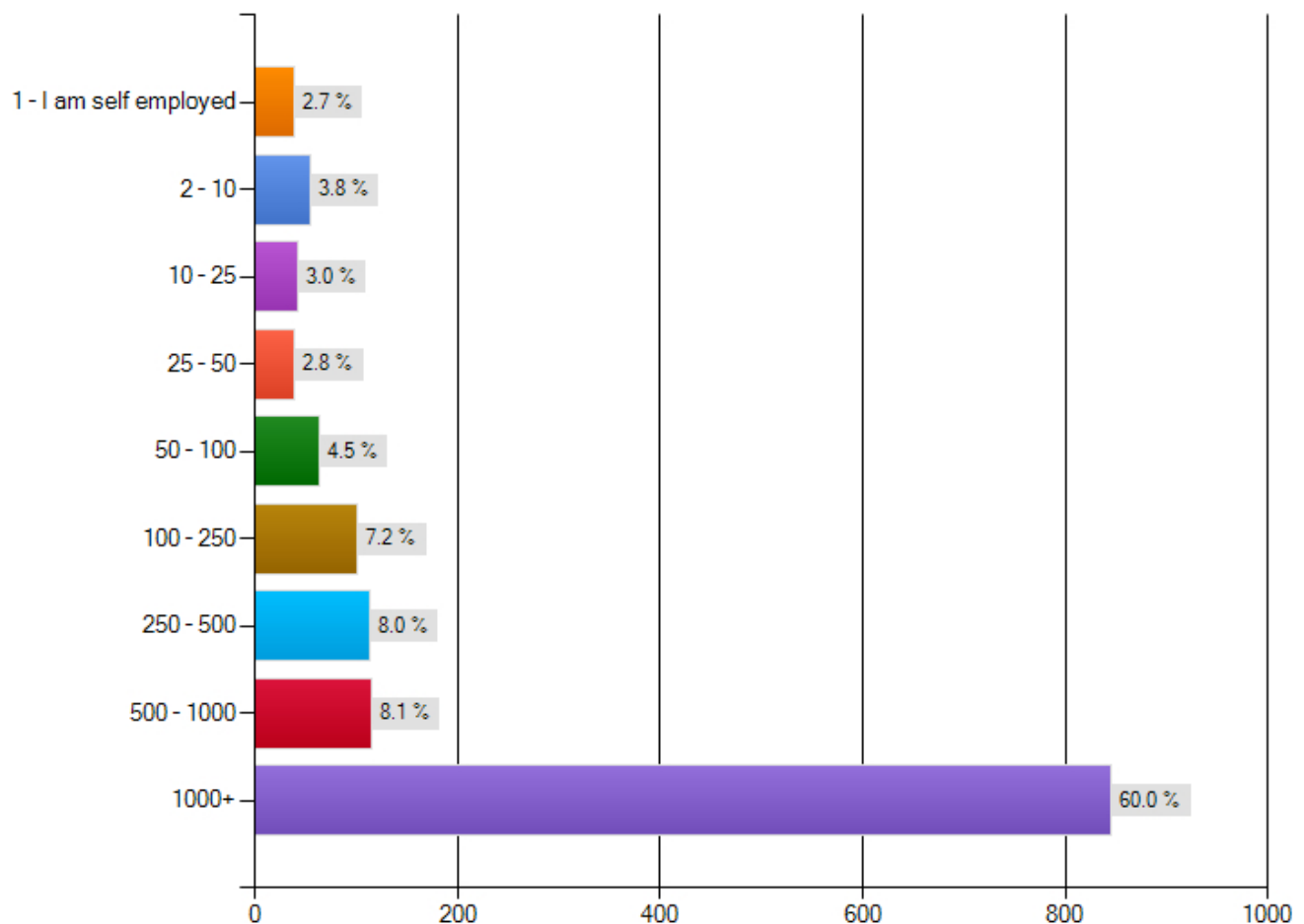
Nearly all of the respondents reported being involved with databases for many years. In fact, 60% said they have been a DBA or involved with databases for 10 years or more. The greatest number (30%) said they have been a DBA or involved with databases for 10-15 years, followed by 21% who said 5-10 years, 17% who said 15-20 years and 13% who said more than 20 years. Very few novices participated; only around 2% said they have been involved with databases for a year or less.

#### How long have you been a DBA or involved with databases?

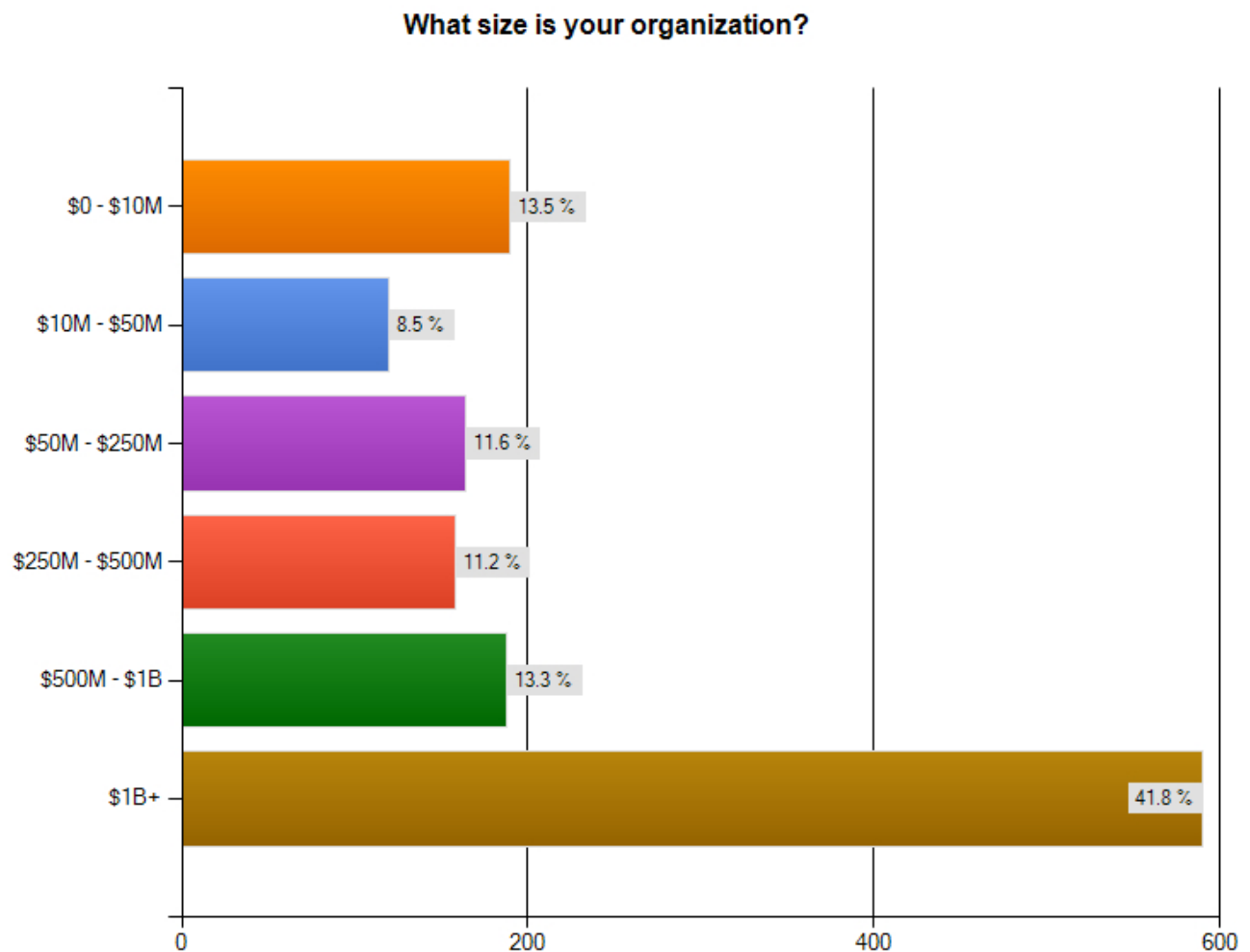


The size of the organizations for which the respondents work were primarily large, enterprise-level, 60% respondents working for organizations with more than 1,000 employees. The rest of the results were mixed. 8% or respondents were from organizations with 500-1,000 people, 8% were from organizations with 250-500 people, and 3% said they are self employed.

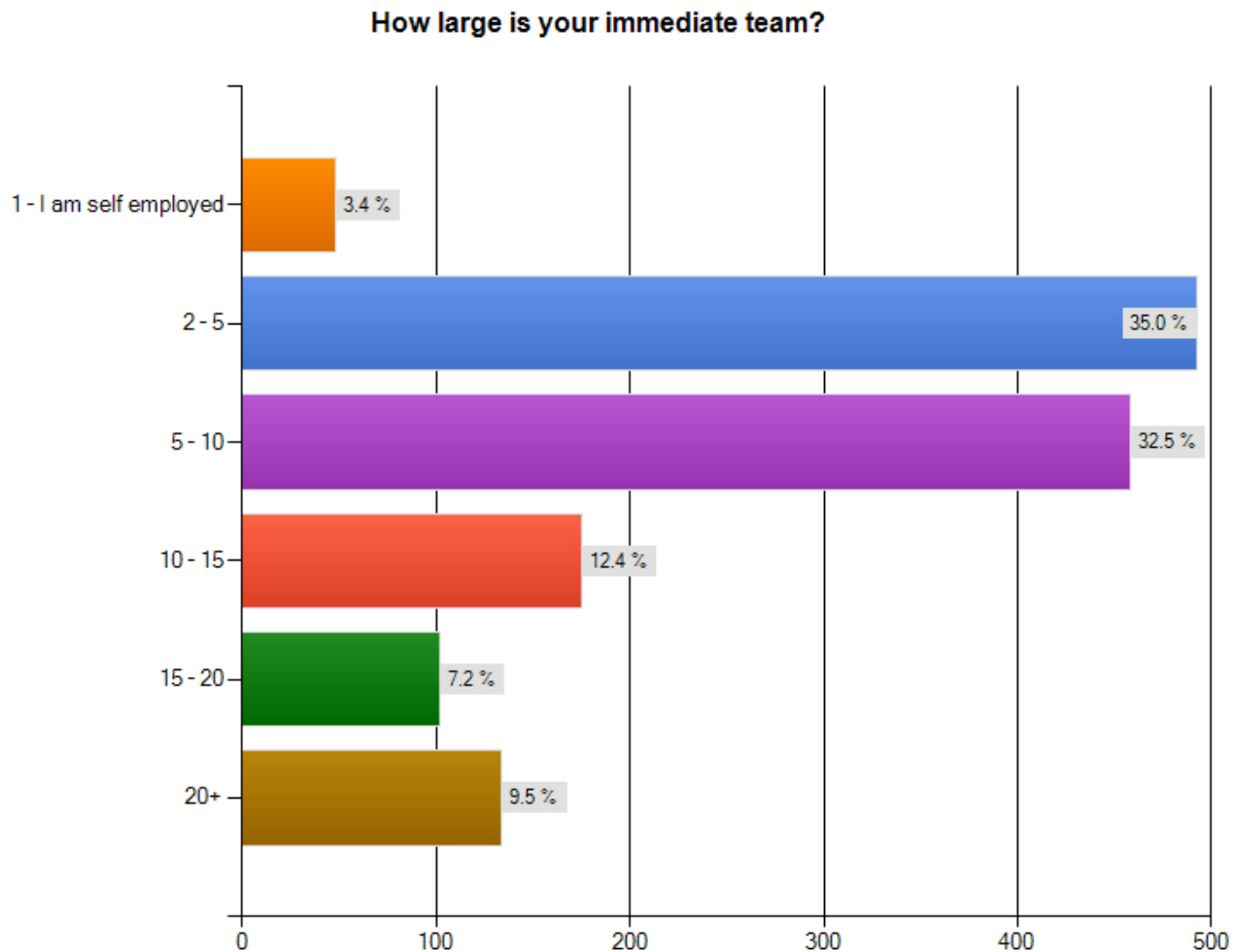
### How many people work at your organization?



Company revenues corresponded to company size - 42% have annual company revenues in excess of \$1 billion. Tied for the next highest with 13% were those with annual company revenues between \$0 and \$10M and those with revenues between \$500 million - \$1 billion.

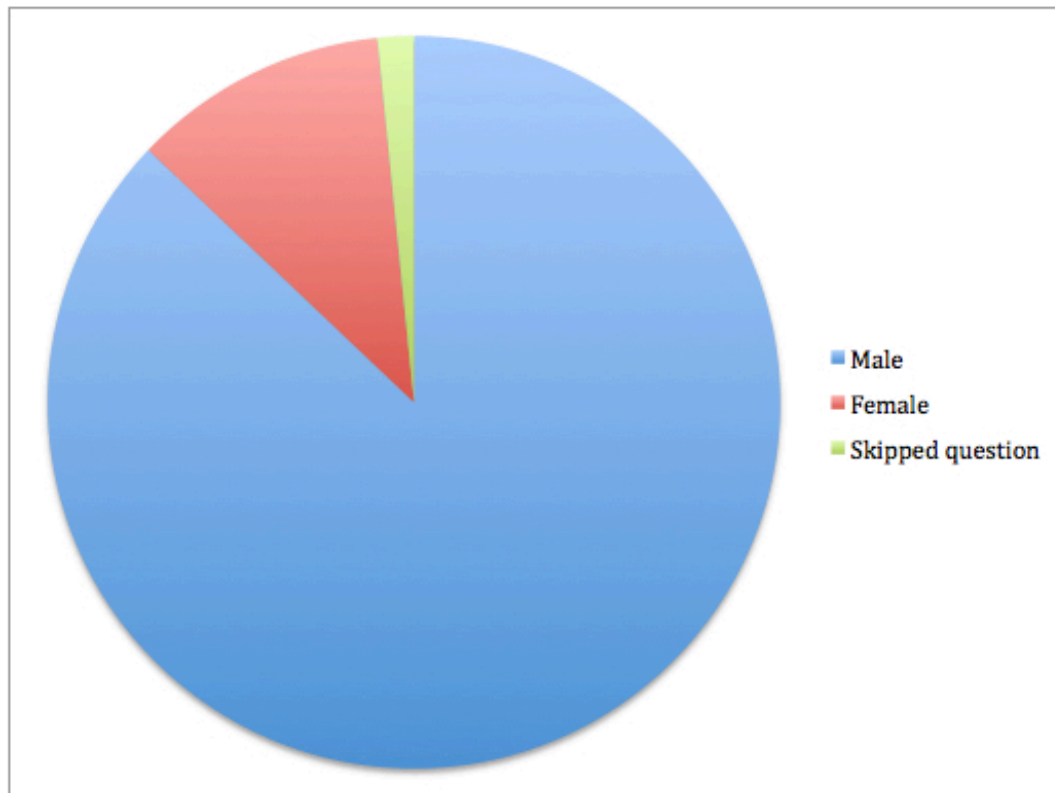


The size of the respondents' immediate teams could be considered average. Most (35%) said their team has 2-5 members, followed by 5-10 members (33%), and then 10-15 members (12%). Approximately 10% said their immediate team has 20 or more members.



The majority of those who participated in the survey were male (87%), while 11% were female and nearly 2% declined to answer the question.

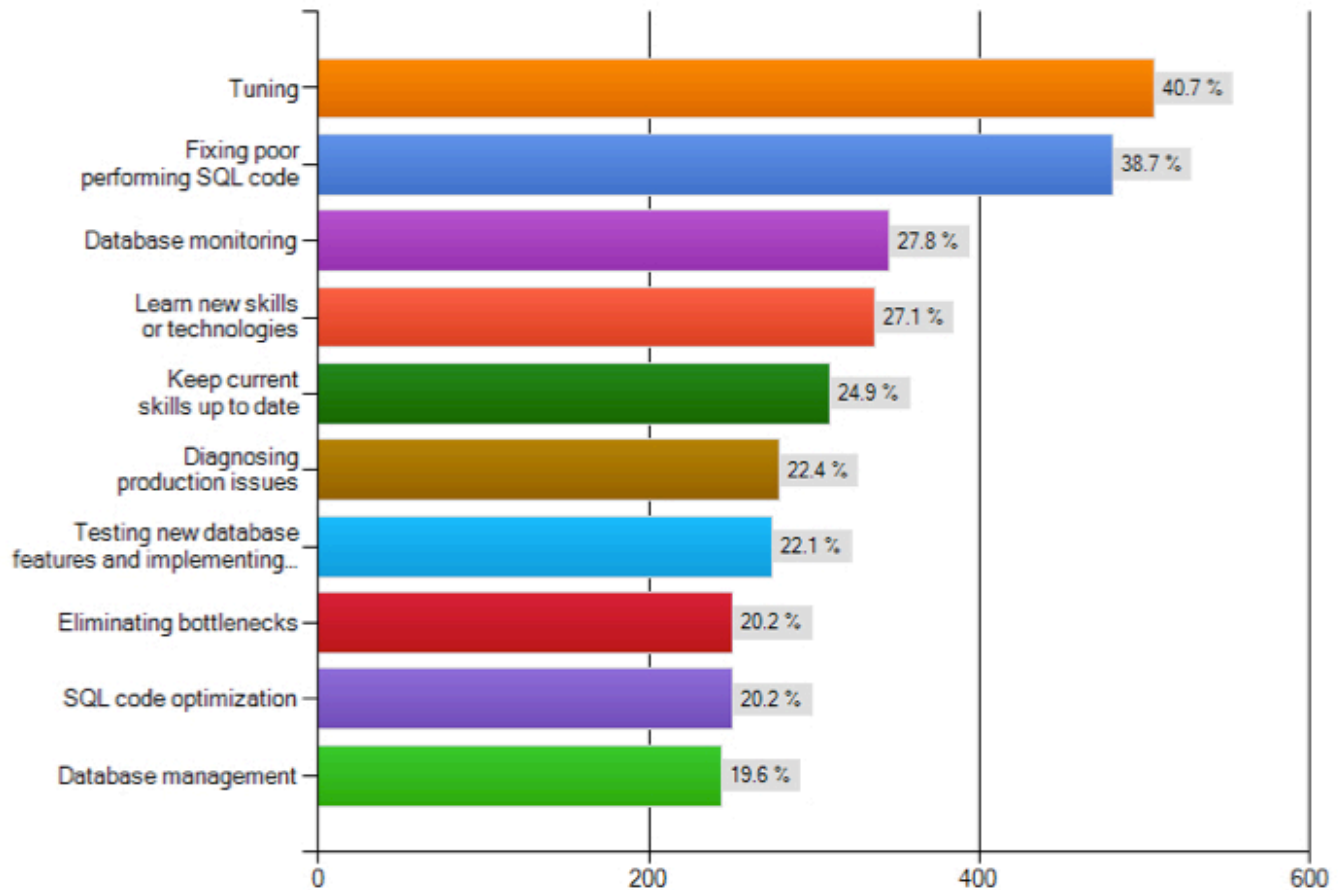
### What is your gender?





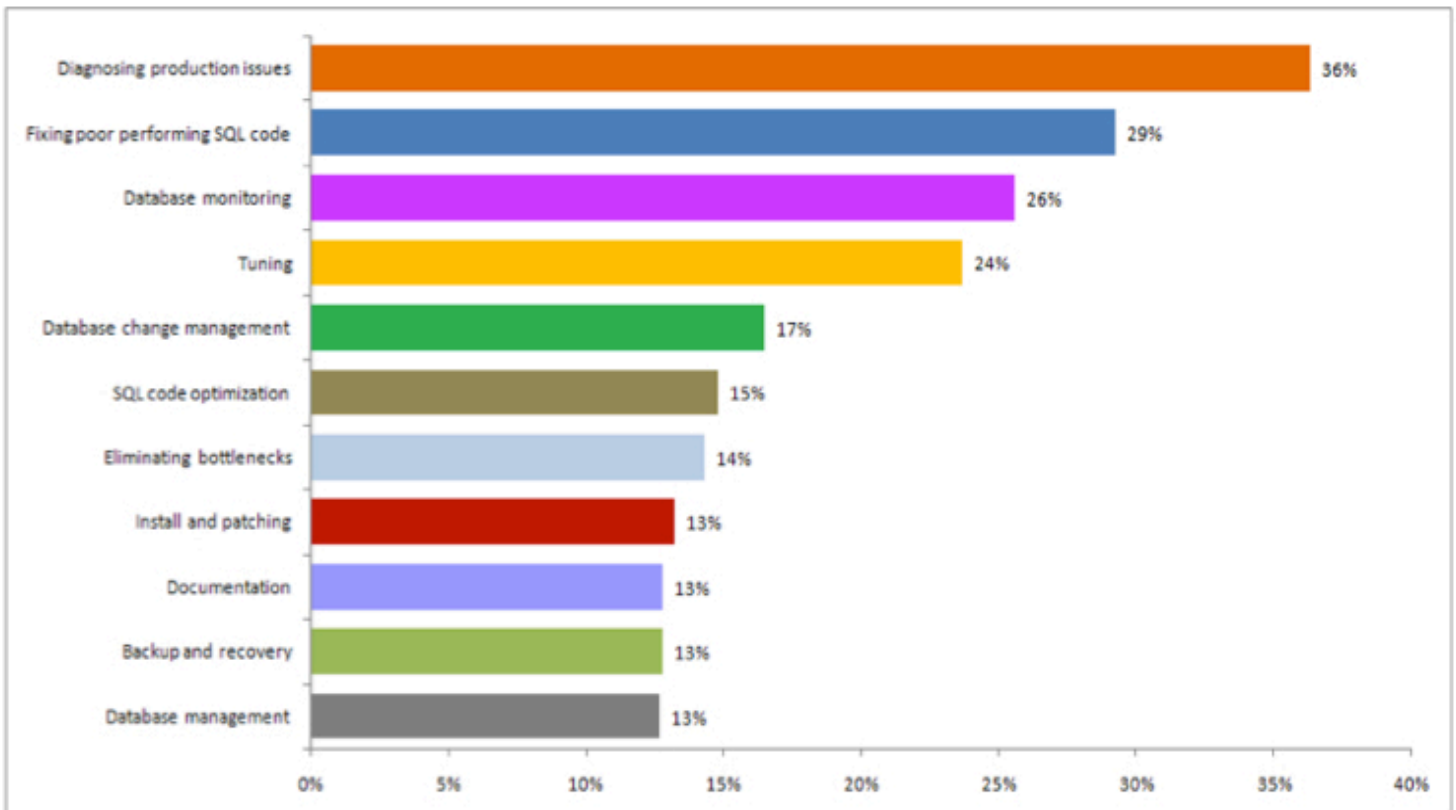
When asked what type of database activities they wish they had more time to do (select all that apply), the most popular response was tuning, with 41% of respondents citing it. Fixing poor performing SQL code ranked a close second with 39% of mentions, followed by database monitoring in third with 28% of the mentions.

**What types of database activities do you wish that you had more time to do?  
(select all that apply)**

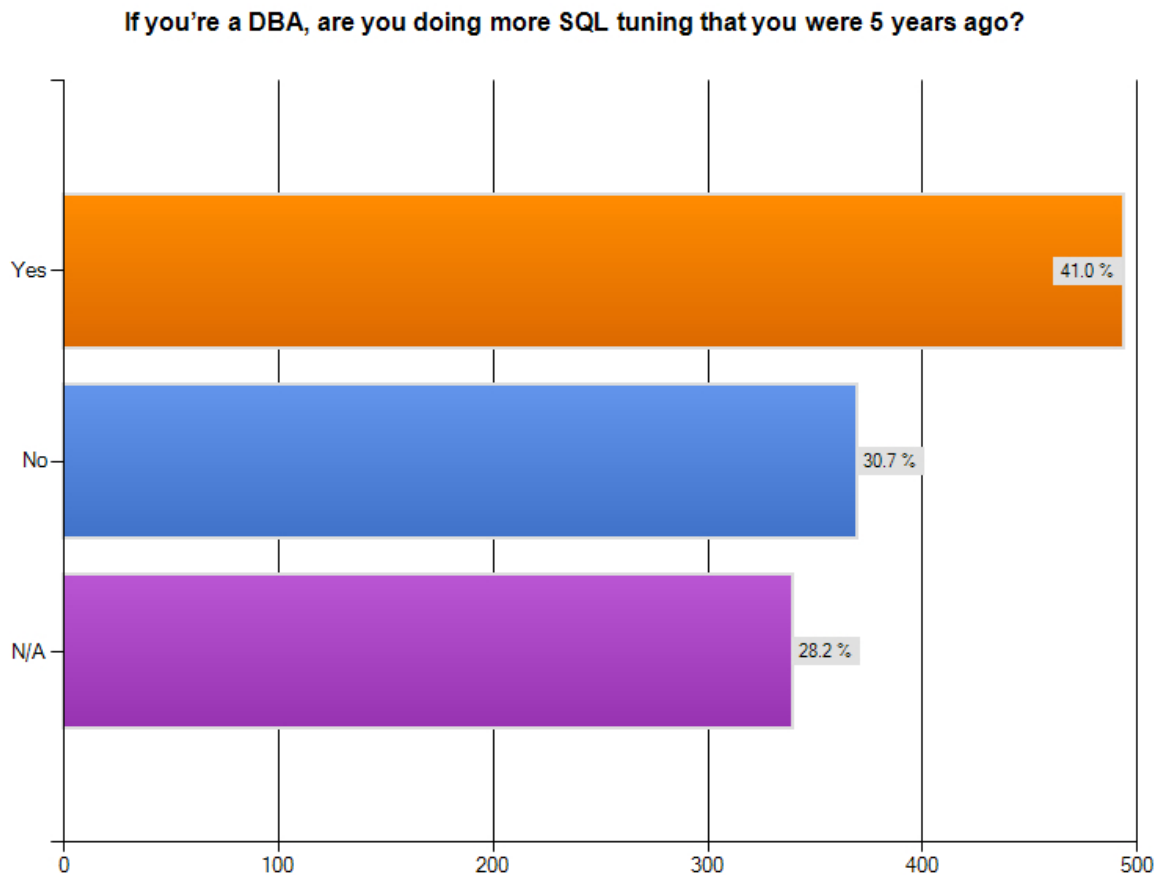


When asked what manual tasks they would like to automate, diagnosing production issues was cited most frequently by respondents (36%). Fixing poor performing SQL code ranked second with 29% of the mentions, database monitoring was third with 26%, and tuning again appeared toward the top with 24% naming it.

**What tasks would you like to automate that you currently do manually?  
(select all that apply)**

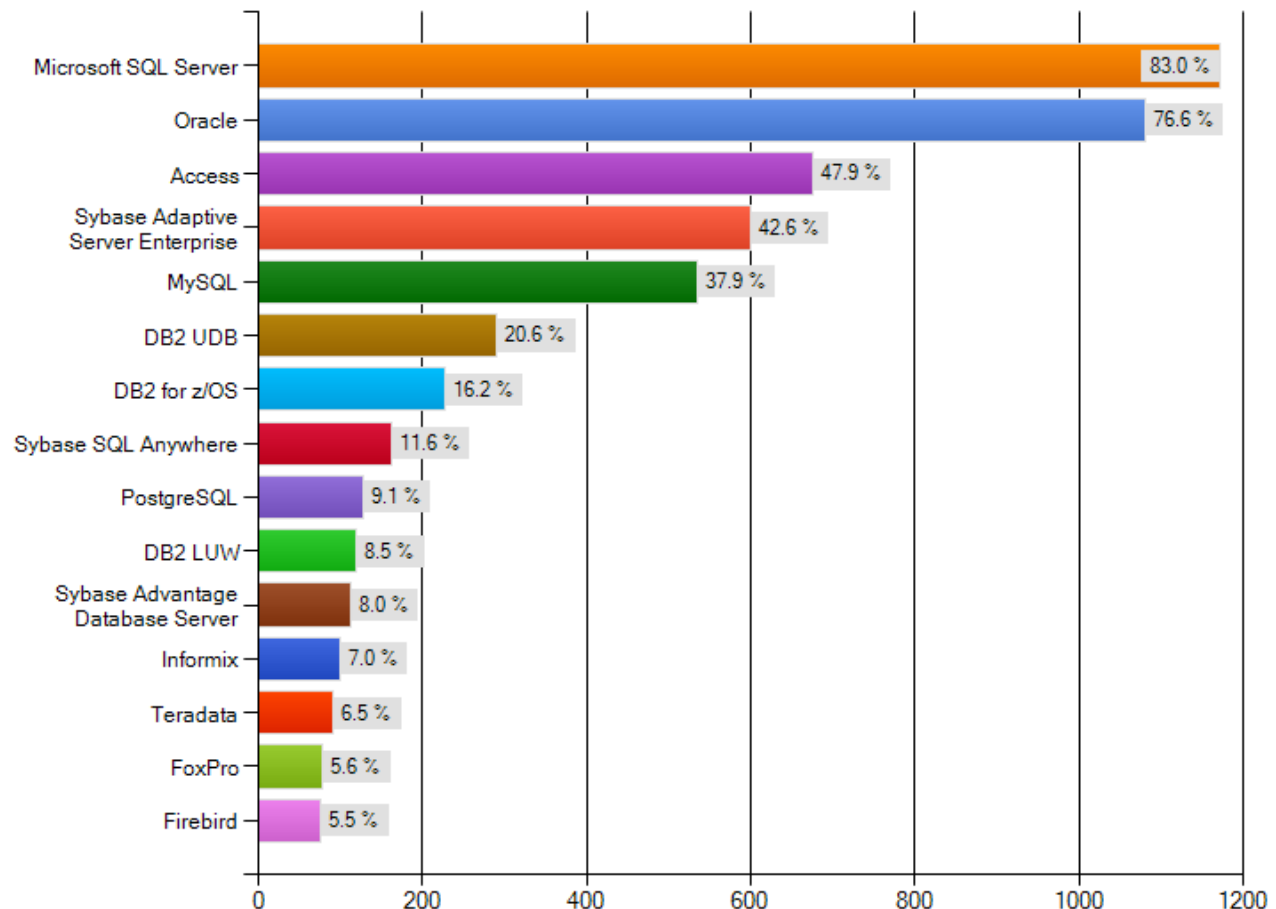


The next question was directed specifically to the DBAs in the survey pool. They were asked if they are doing more SQL tuning than they were doing five years ago. 41% said that they are, while 31% said that they are not. The question was not applicable to the remaining respondents.



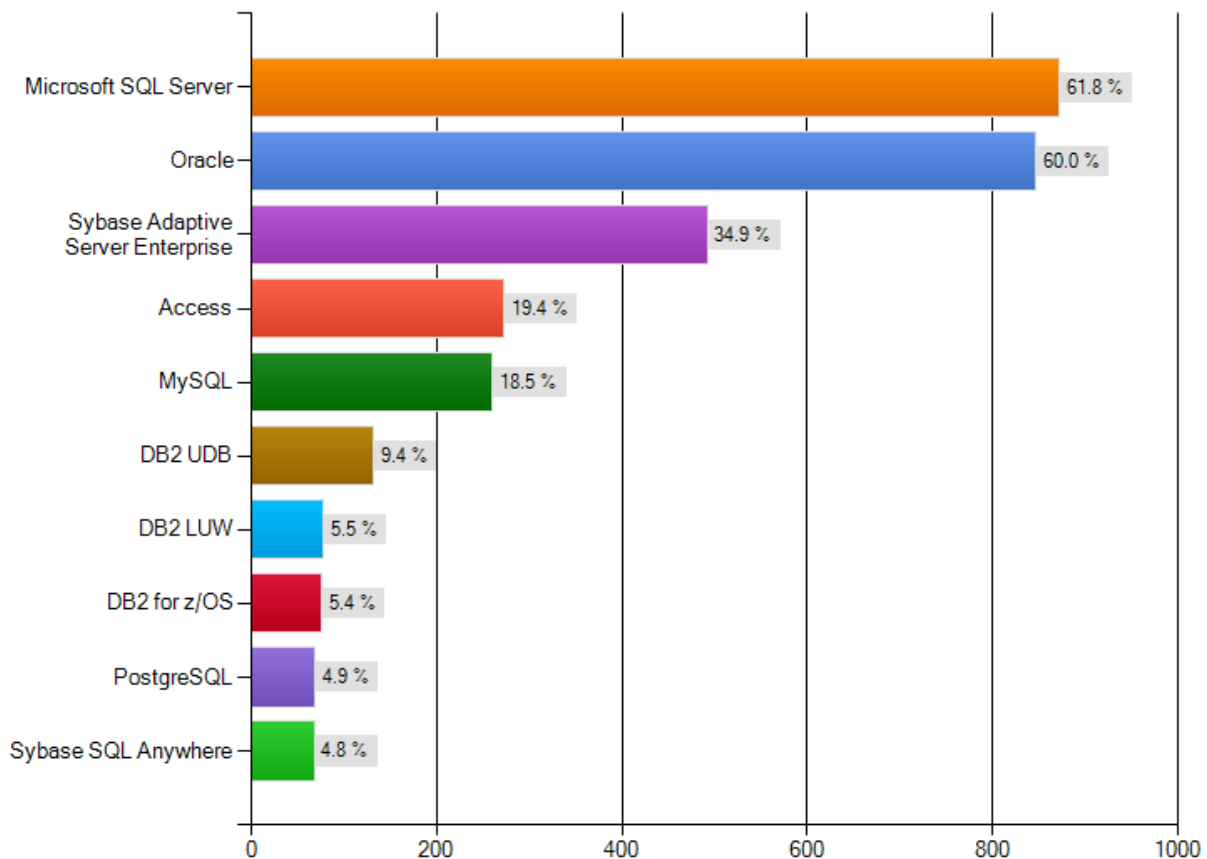
When asked which databases their companies have in house, the respondents cited two more than any others – Microsoft SQL Server – Oracle. Microsoft Access ranked third, followed by Sybase ASE.

**Which databases does your company have in house? Select all that apply**

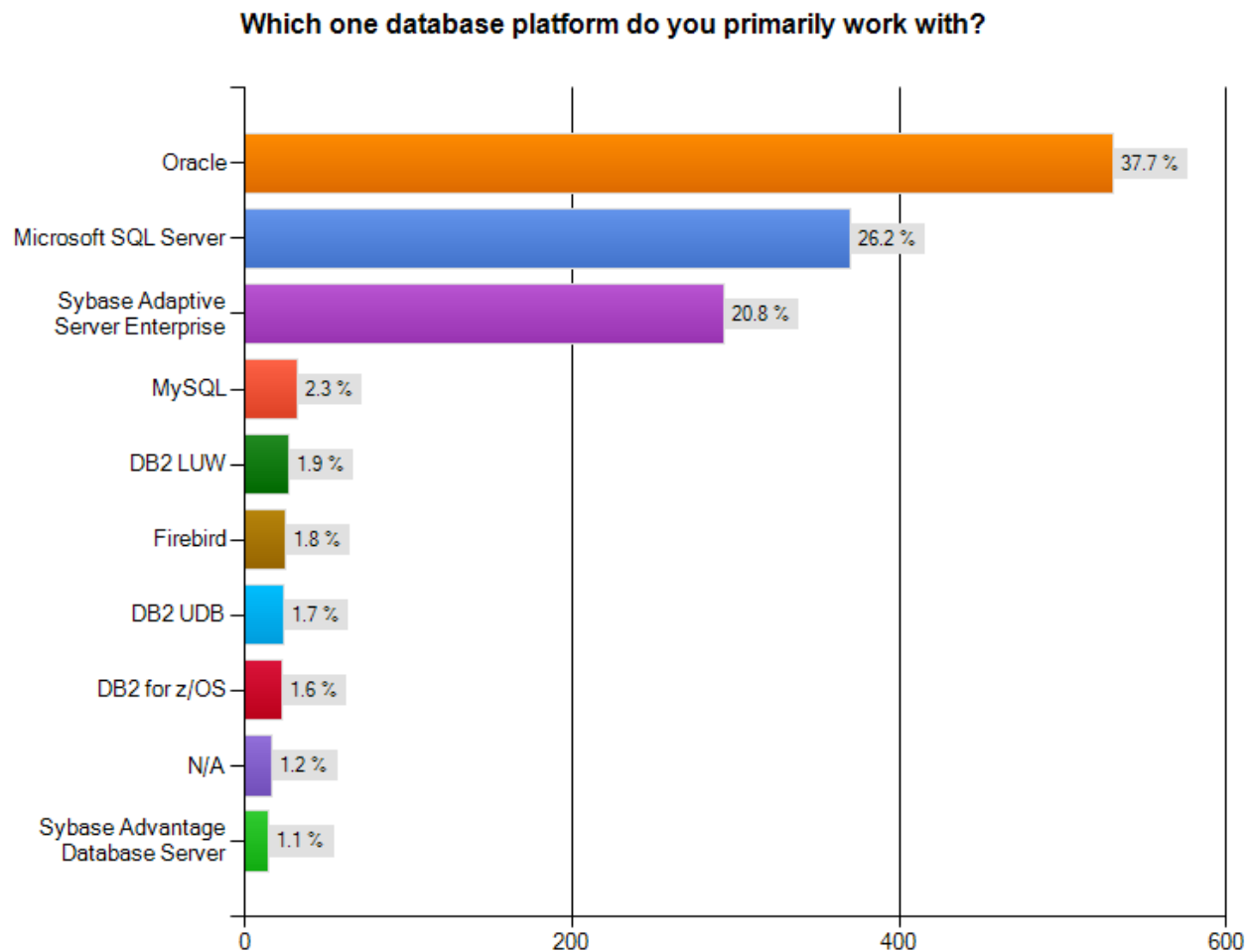


Those surveyed also revealed which database platform they personally work with. They were asked to select all that apply. Microsoft SQL Server, Oracle, Sybase ASE and Microsoft Access were again the top four cited.

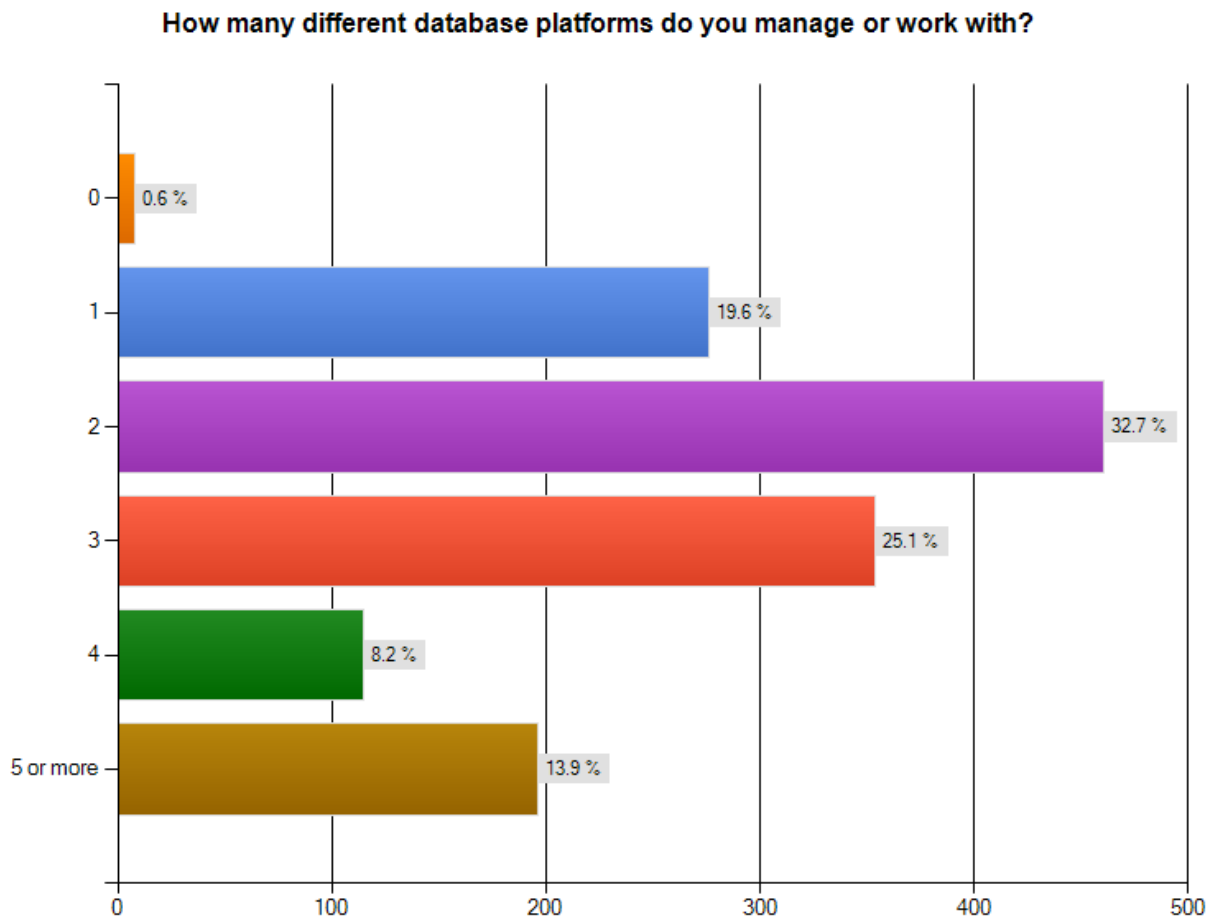
**Which databases do you currently work with? Select all that apply.**



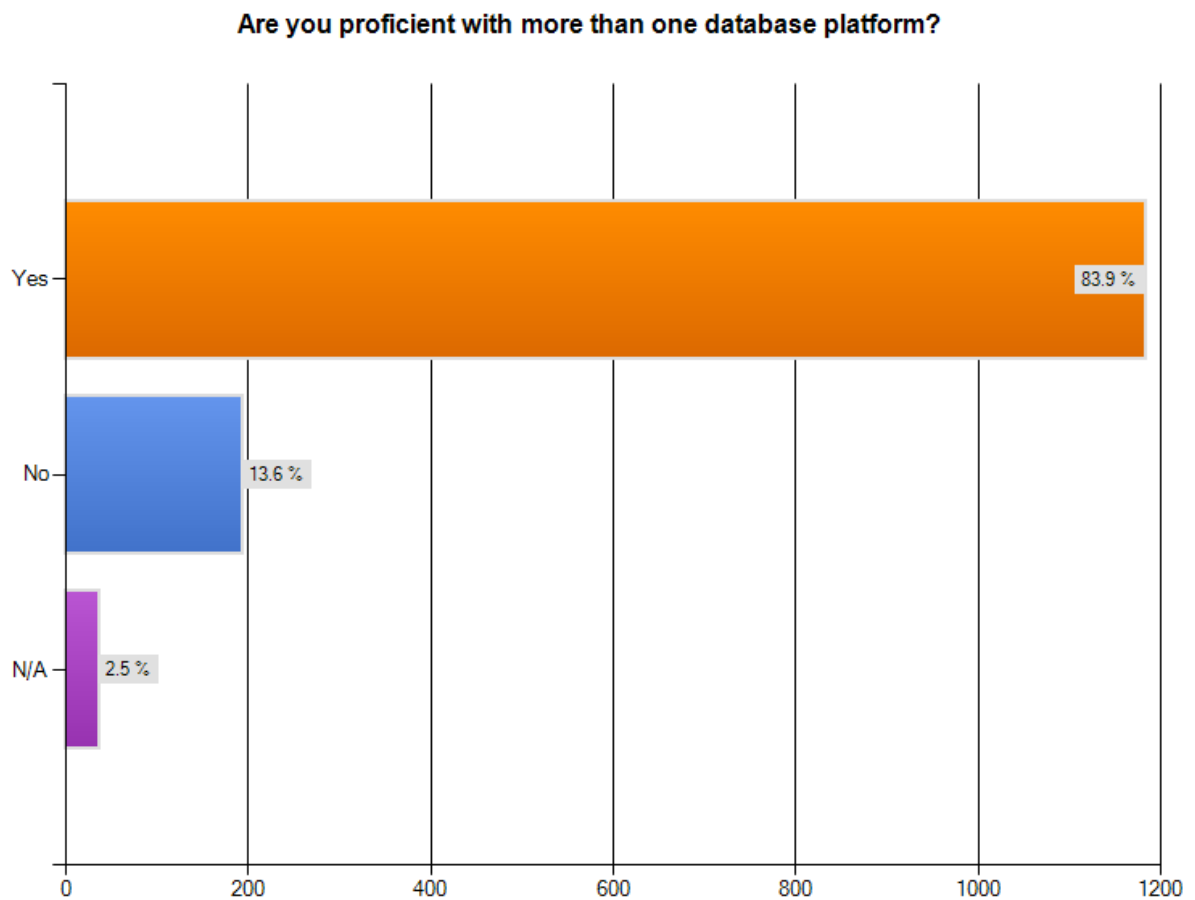
The results changed dramatically when respondents were asked to name the one database management system they work with primarily. Oracle came out above Microsoft SQL Server with 38% of the responses. Meanwhile, Microsoft Access all but fell off the list with only 0.4%.



Multi-platform database management appears to be the norm rather than the exception, with 80% of respondents reporting that they work with two or more types of database management systems. Most work with two. Nearly 14% work with five or more.

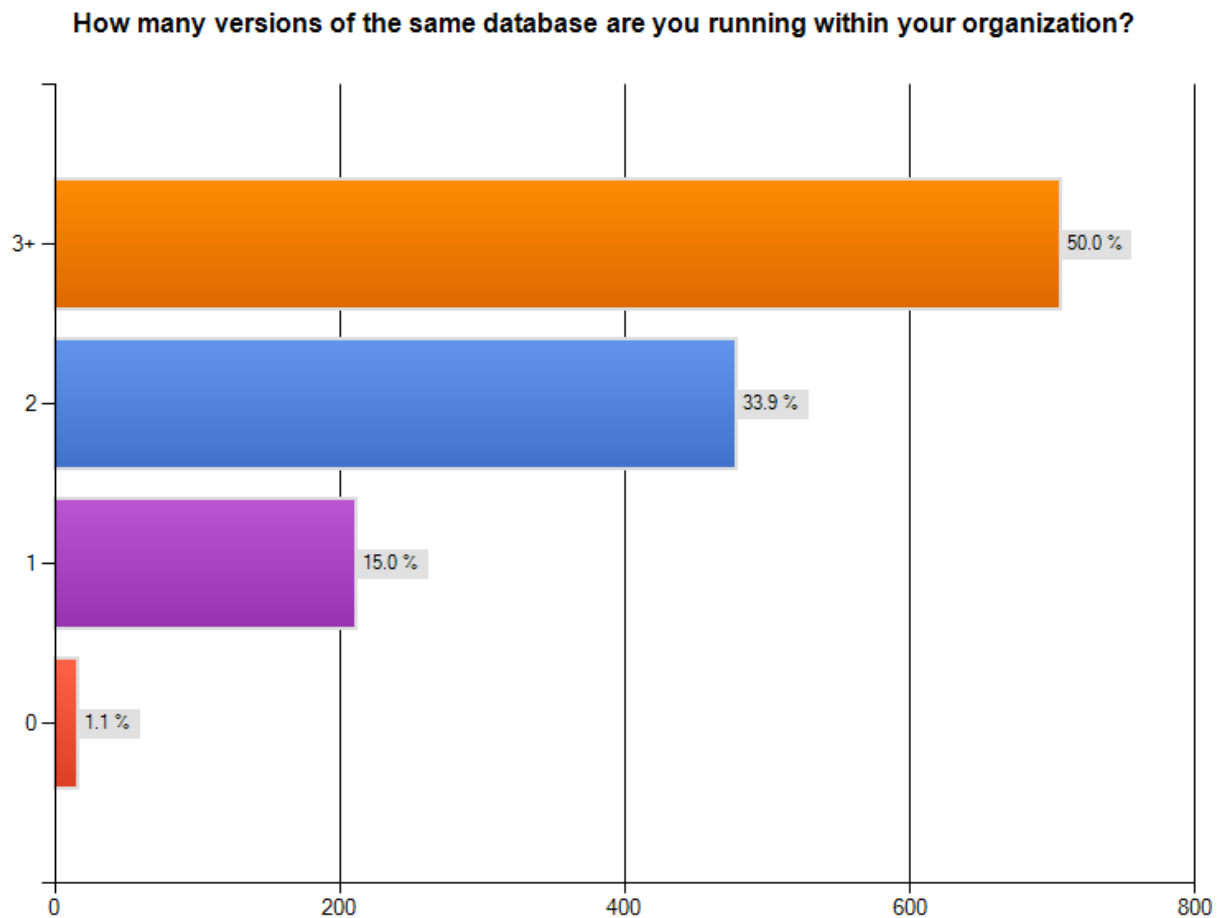


The vast majority - 84% - claimed that they are proficient with more than one database type.

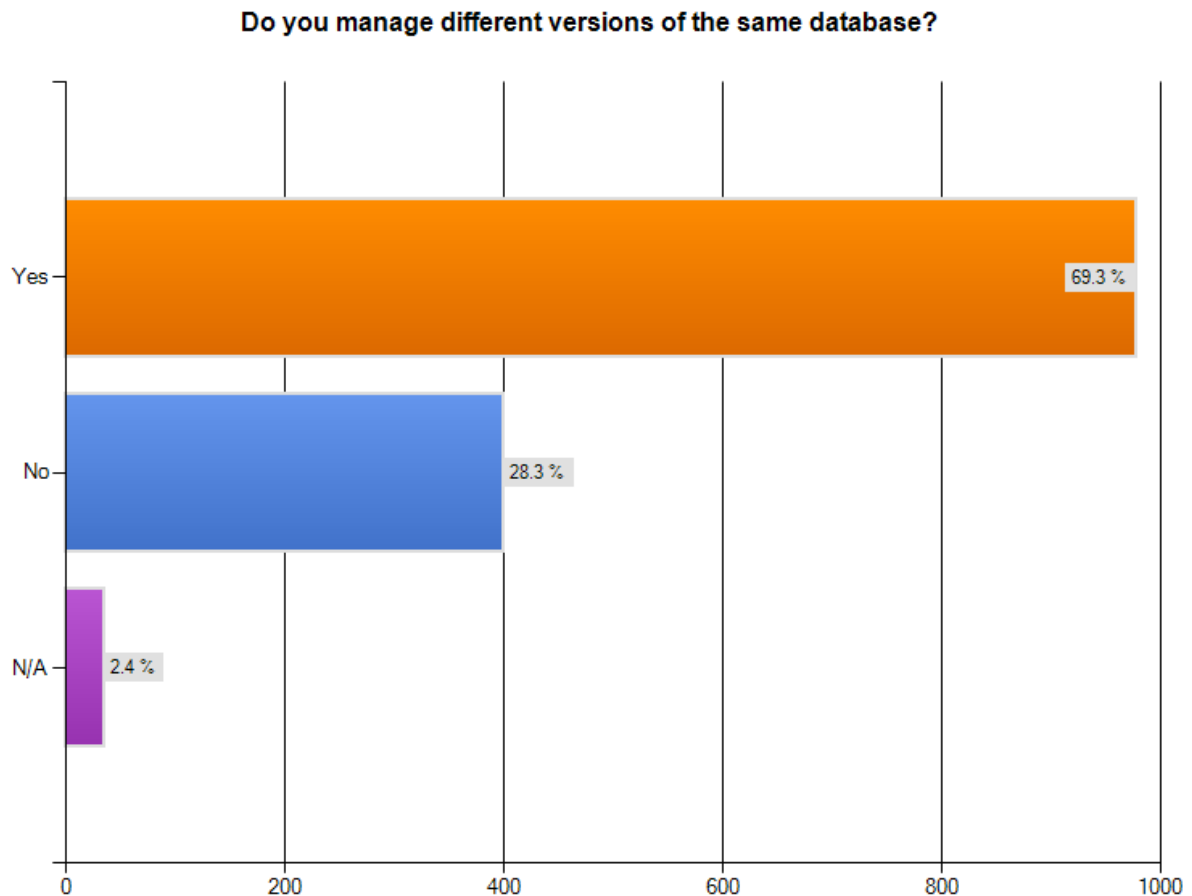




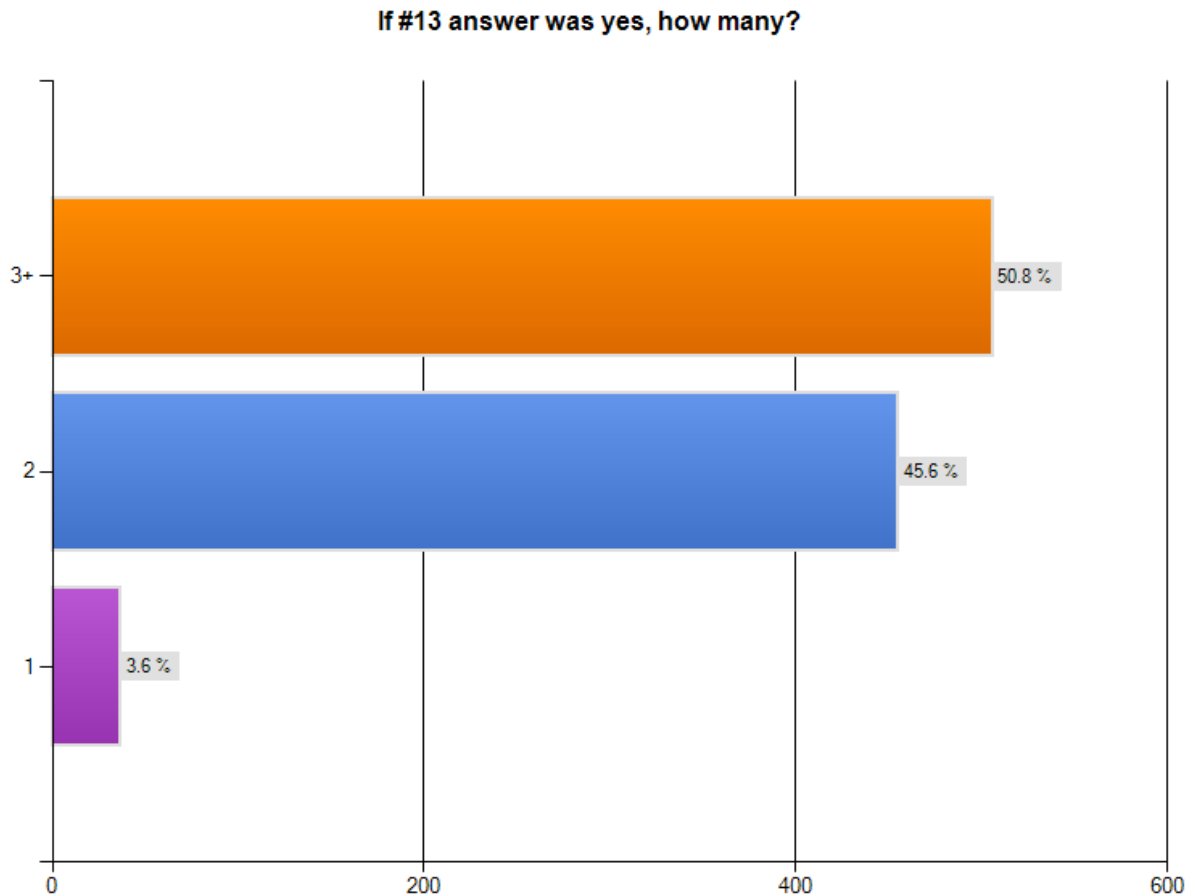
The survey revealed that most of the respondents' organizations are running two or more versions of the same database, with 50% running three or more. Only 15% of organizations are running one version of the same database, putting them in the minority.



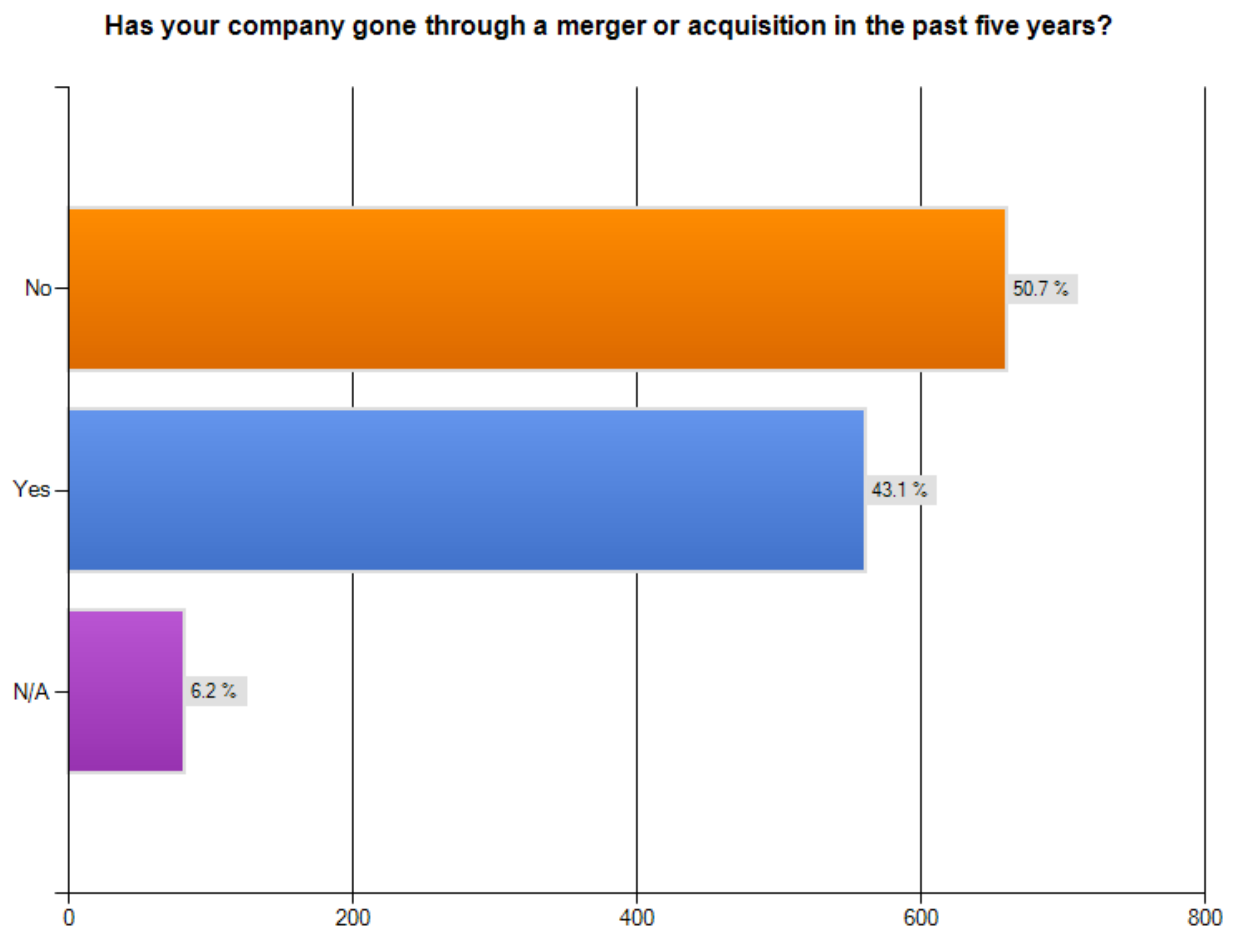
Most DBAs surveyed are also tasked with managing multiple versions of a database, adding another of complexity to their responsibilities and creating even more room for error. The survey showed that 69% manage more than one version of the same database and.



Of those who reported that they manage more than one version of the same database management system, 51% said they manage three or more versions, while 46% manage two versions.

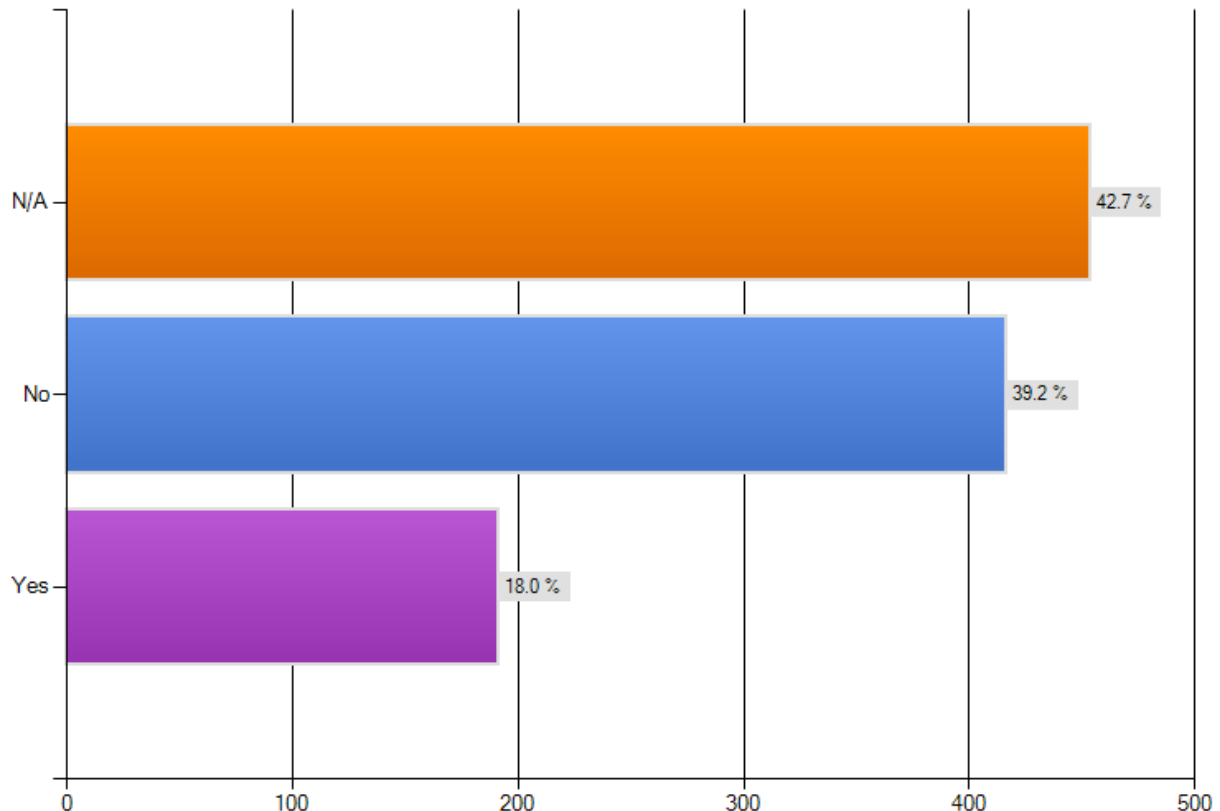


Close to half of those surveyed said that their organization has been part of a merger or acquisition in the past five years.

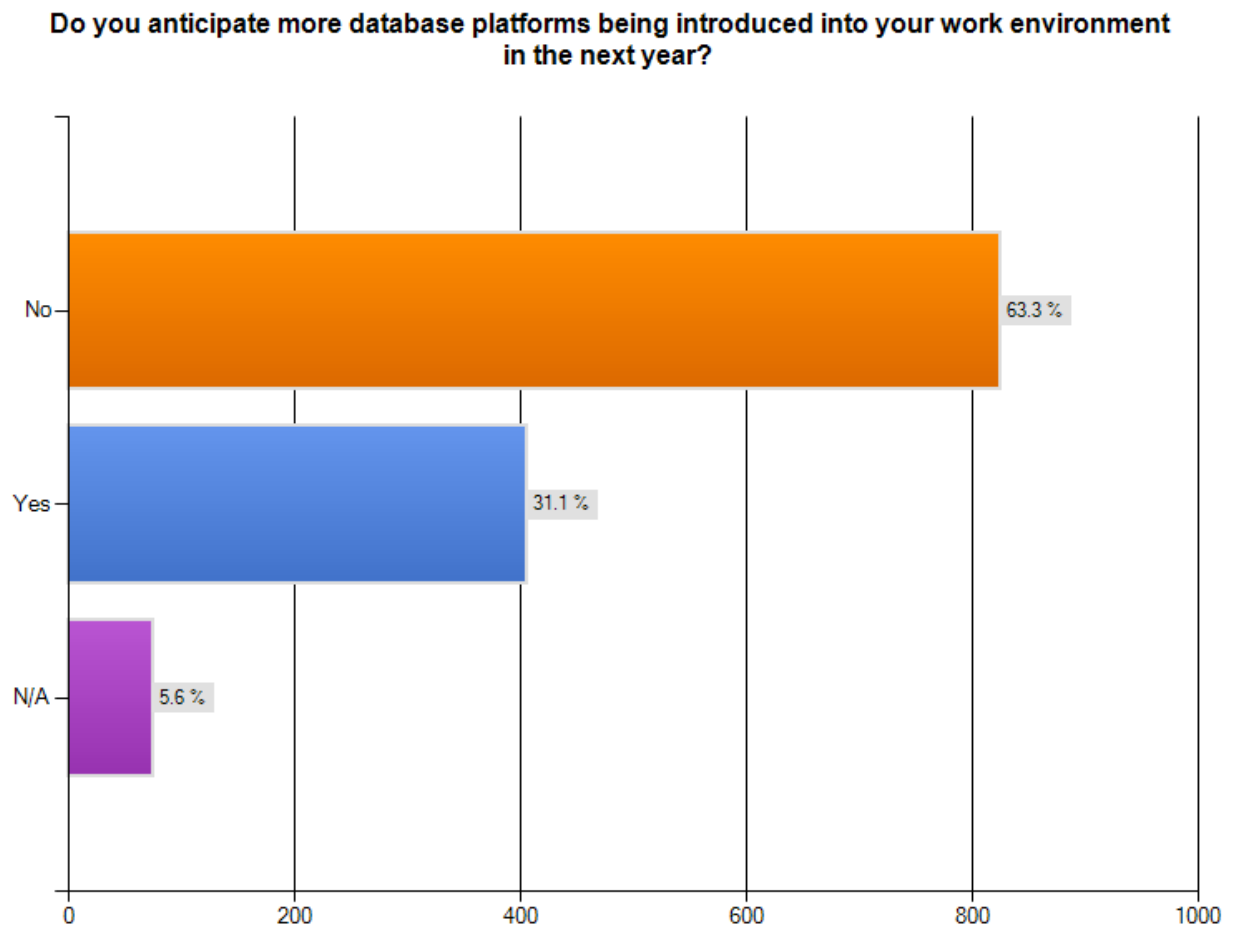


Mergers and acquisition may be partly to blame for the increase of heterogeneous database environments and the new batch of problems they bring for DBAs. Of those who reported that their companies had gone through an M&A in the past five years, 18% said that they began working with new and/or additional database platforms as a result.

**If #1 is yes, did you have to begin working with more or another database platform as a result?**

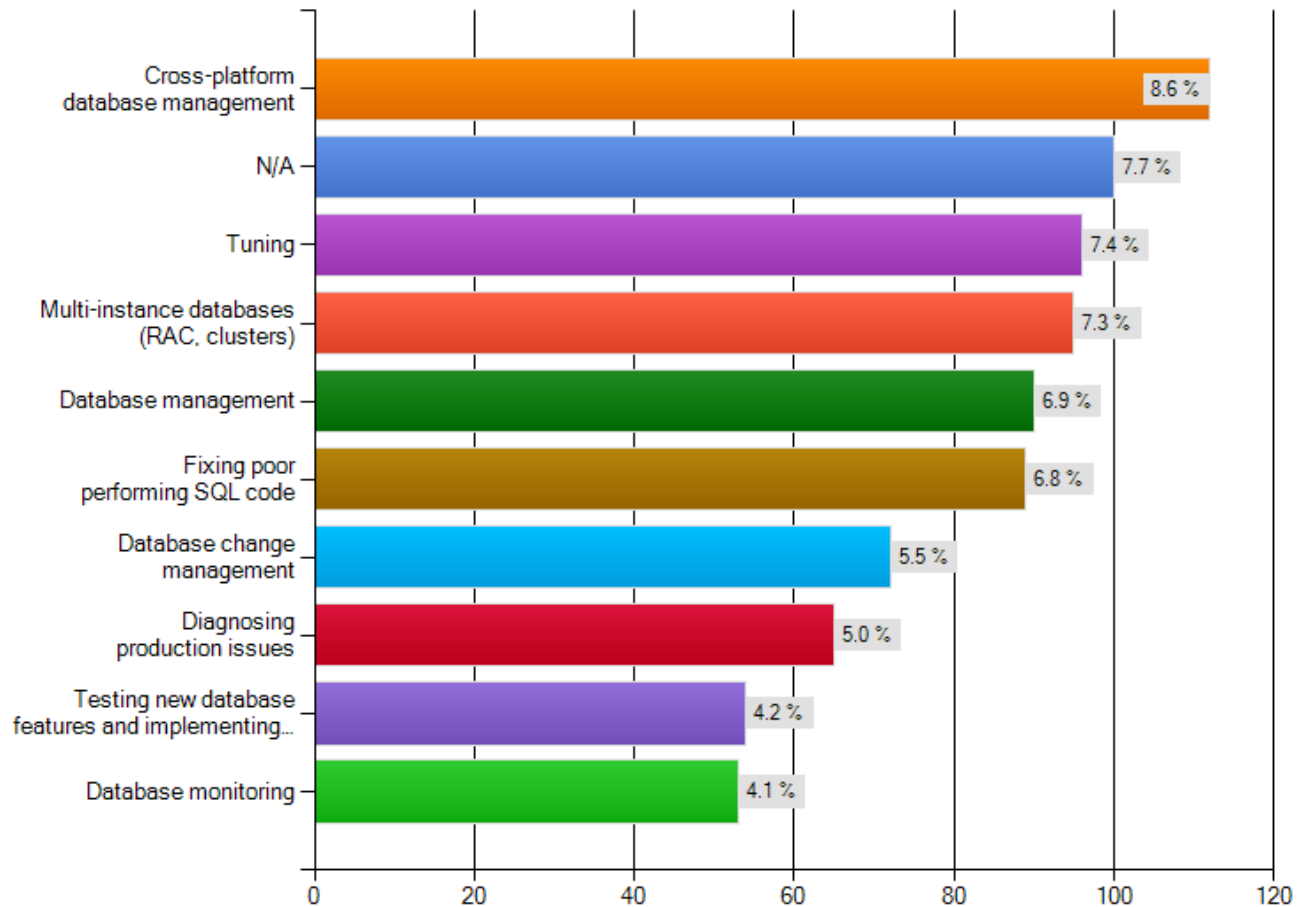


Whether it is through a company acquisition or a newly introduced application, nearly one third of respondents expect more database platforms to be introduced into their organizations in the next year.

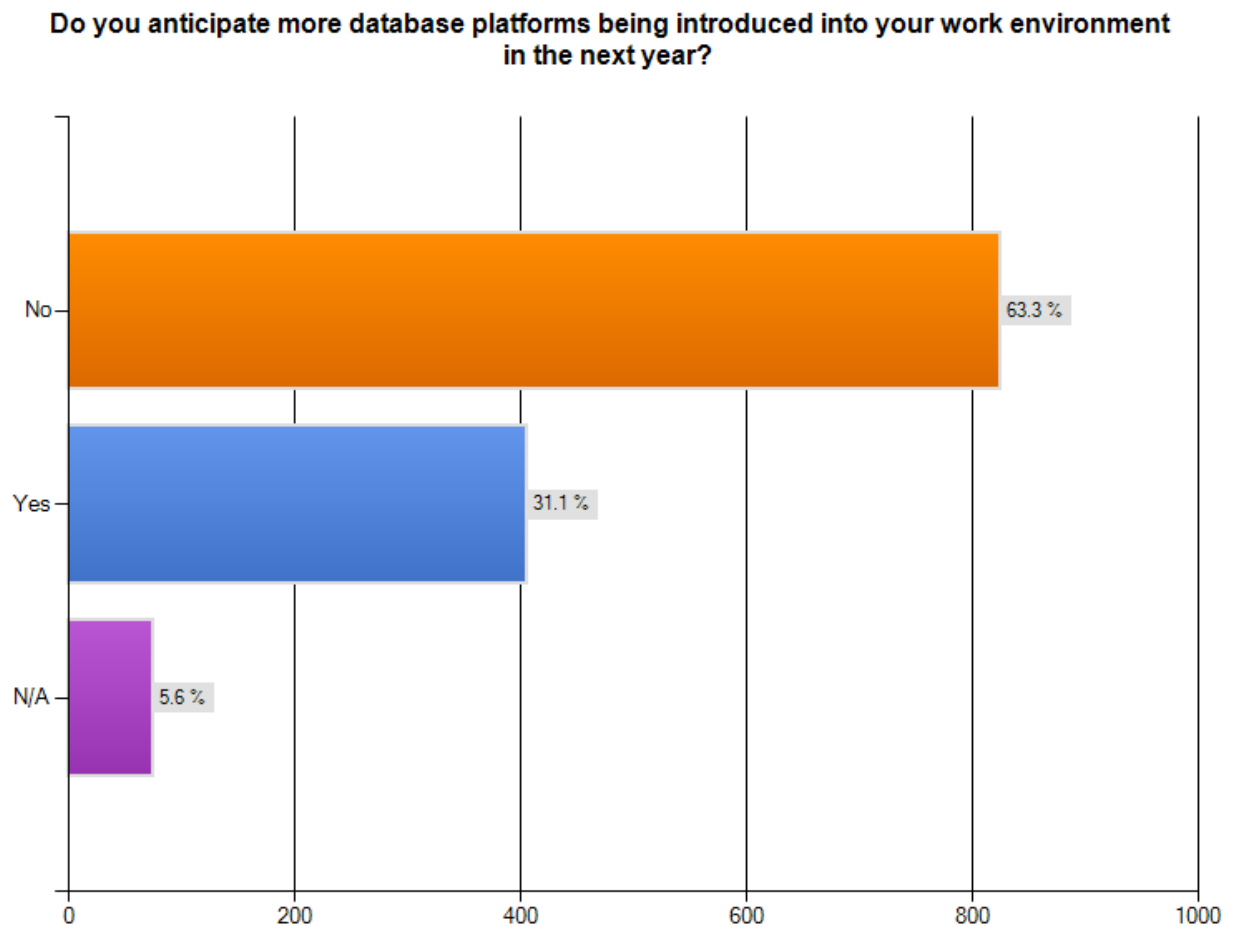


When asked to name the single biggest database-related challenge that they'll face in the next year, the greatest number of respondents said cross-platform database management. Multi-instance databases and tuning tied for second place, while database management came in third.

**What is the one biggest database-related challenge that you face in the next year?**

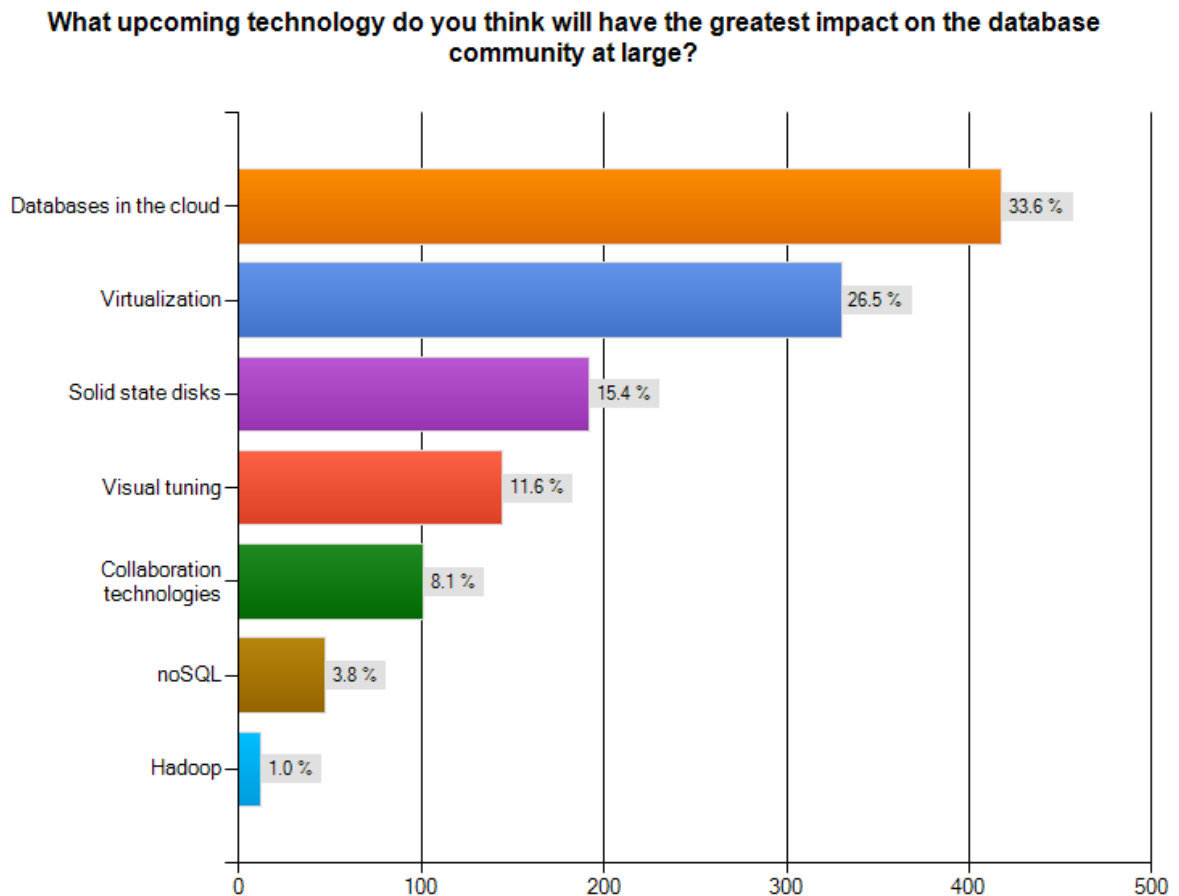


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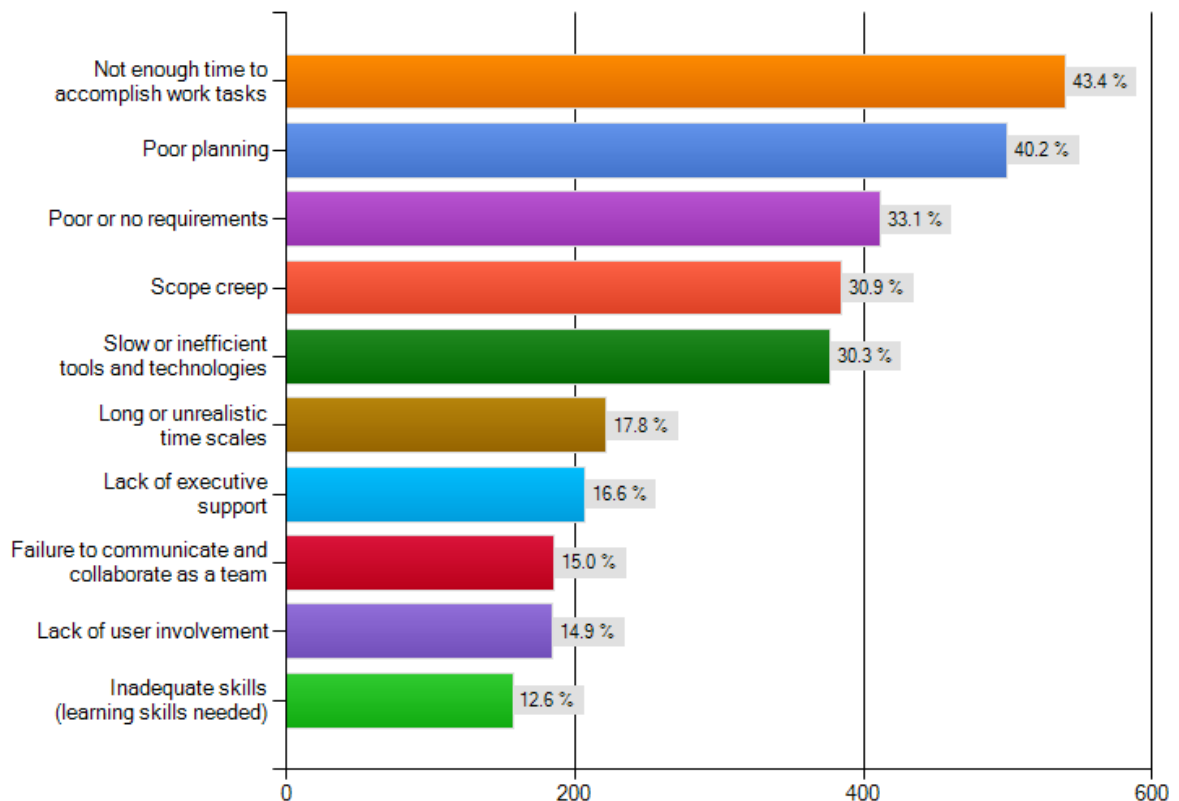


When asked which upcoming technology will have the greatest impact on the database industry, more than one-third of survey respondents (34%) selected databases in the cloud. Virtualization ranked second with 27%, then solid state disks with 15%, visual tuning with 12% and collaboration earned 8% of the vote to round out the top five.

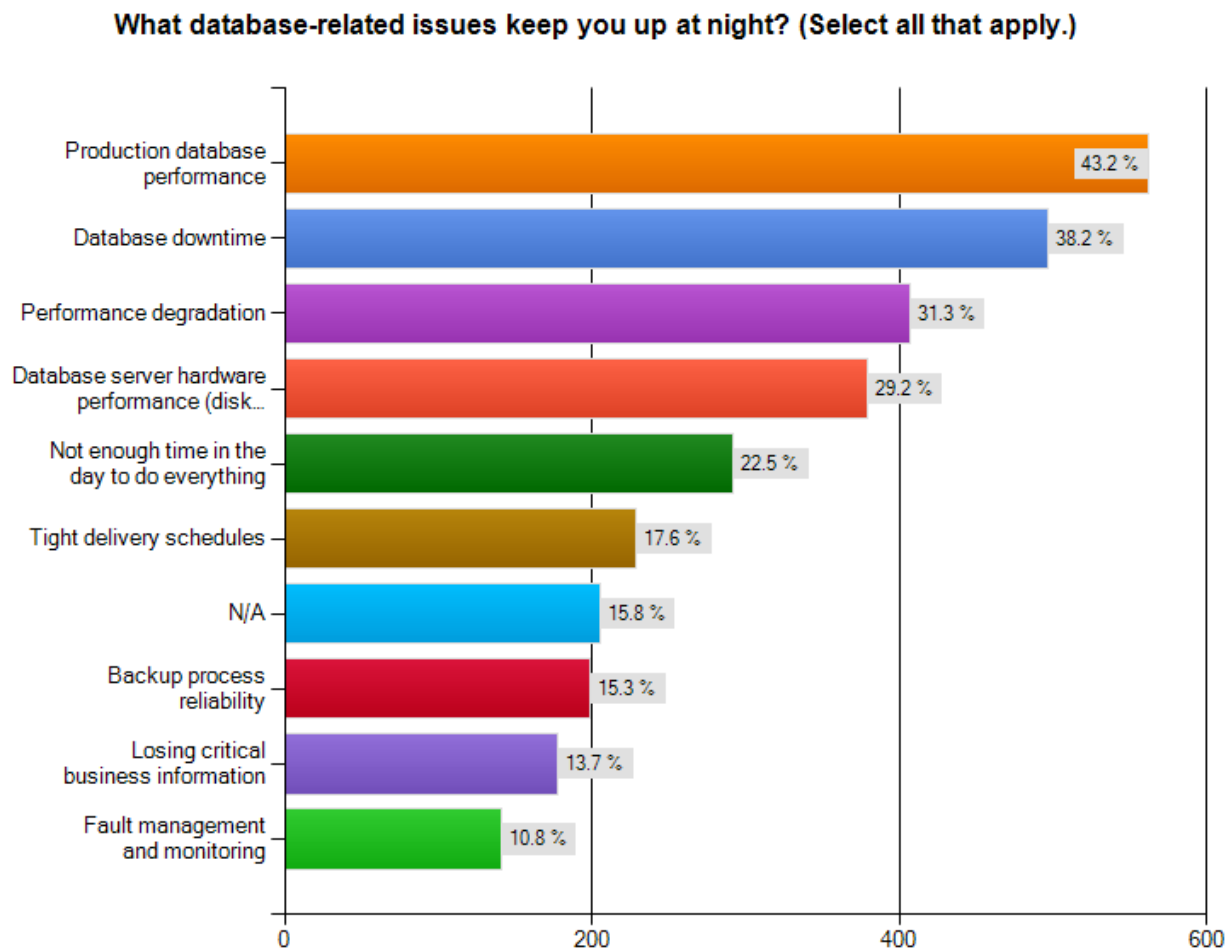


There seemed to be a general consensus among survey participants about the biggest project challenges they face, with 43% complaining of not enough time to accomplish work tasks, and 40% pointing to poor planning as a huge challenge. Also high on the list were poor or no requirements (33%) and scope creep (31%).

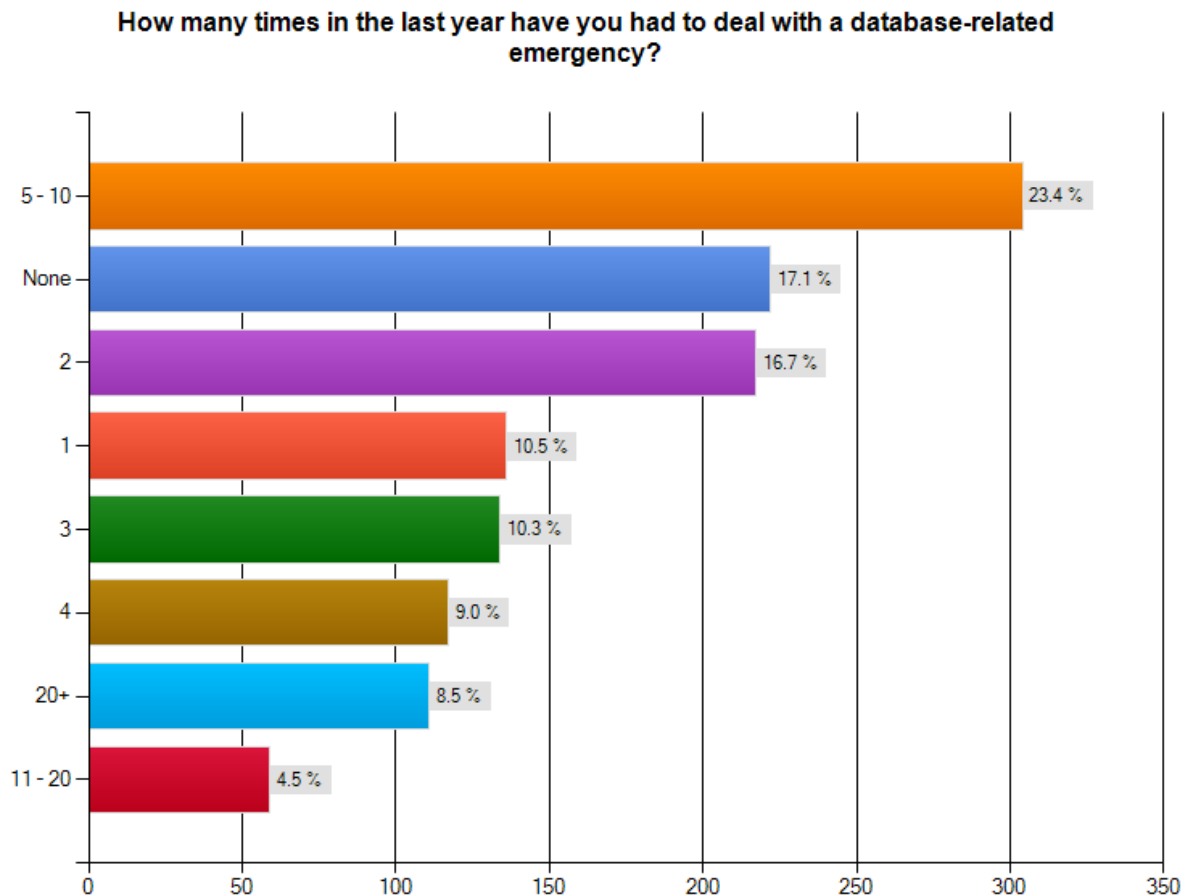
**What are the three biggest project challenges that you face as a database professional?  
(Please choose your top 3)**



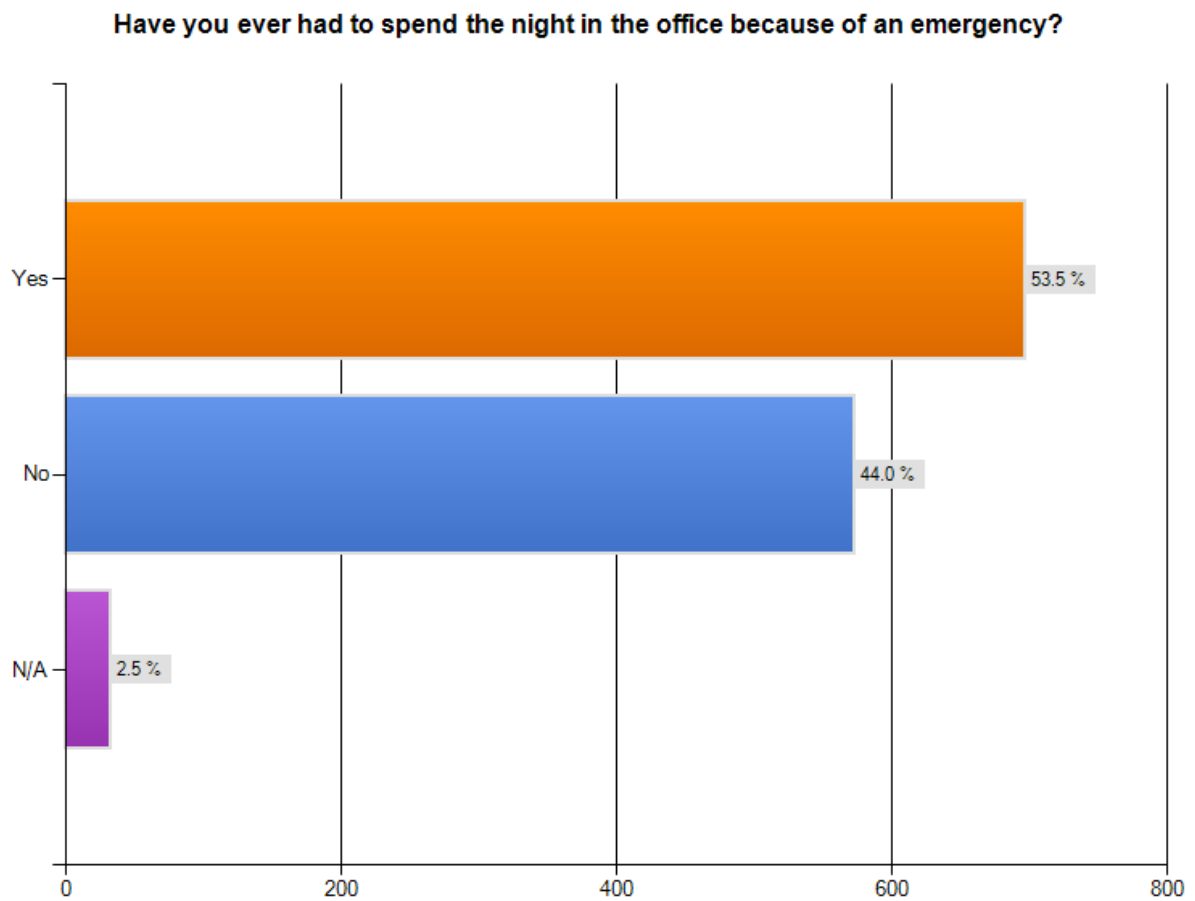
The survey also revealed that performance and emergencies are keeping DBAs from getting a good night's rest. When asked what database-related issues keep them up at night, production database performance was cited by 43% of respondents, placing it atop the list. Database downtime was the second-biggest contributor to DBA insomnia with 38%, while 31% said performance degradation.



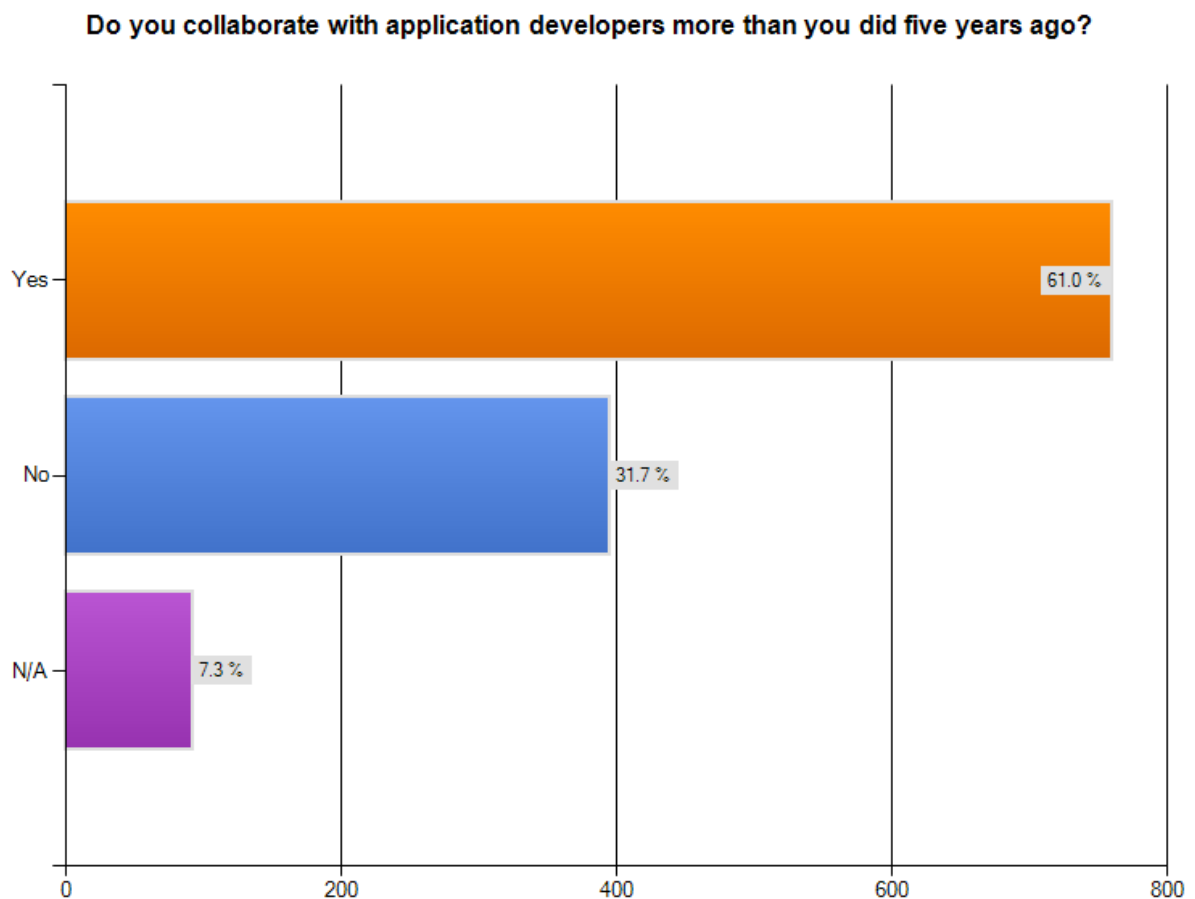
The stereotype of DBAs constantly putting out fires seems to be more fact than fiction. In fact, 37% of those surveyed reported dealing with five database-related emergencies in the past year, and of those, 9% said they dealt with more than 20. A fortune 17% managed to avoid any emergency situations.



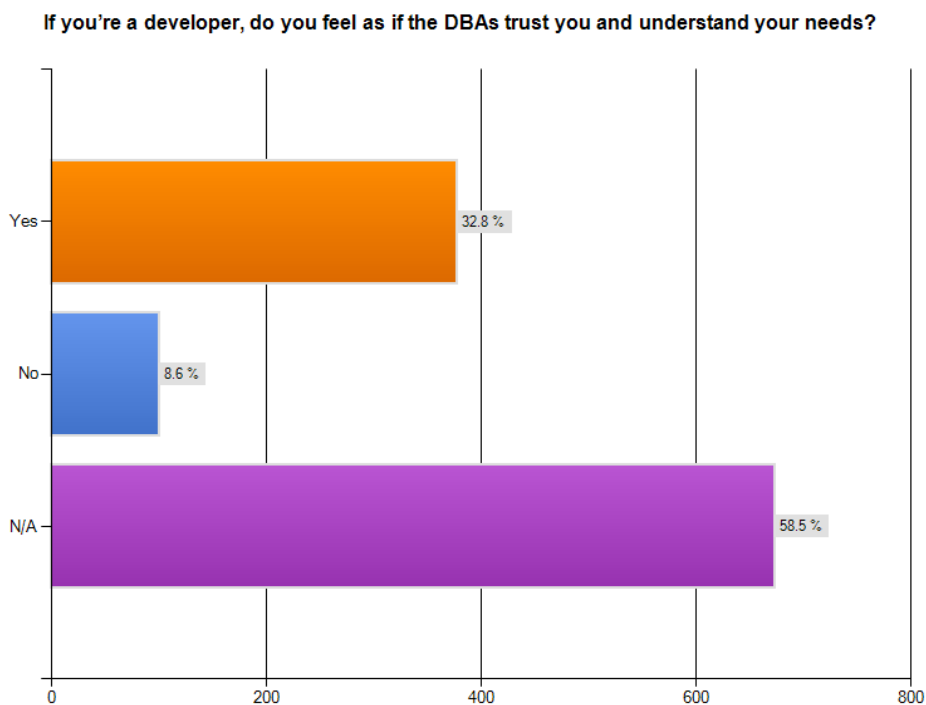
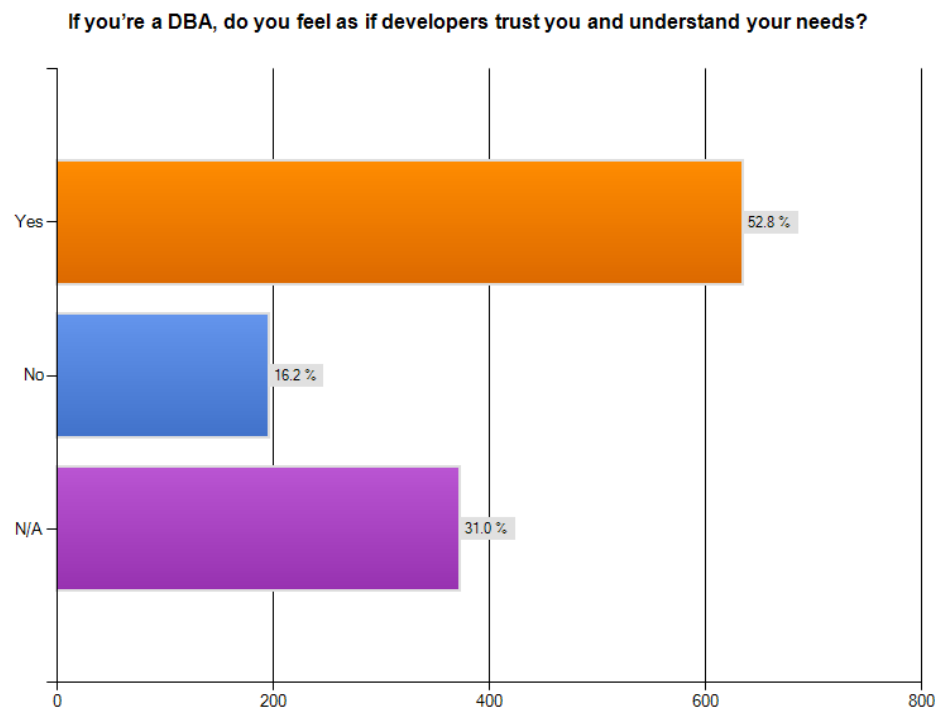
More than half of respondents said they have spent the night in the office because of a database emergency.



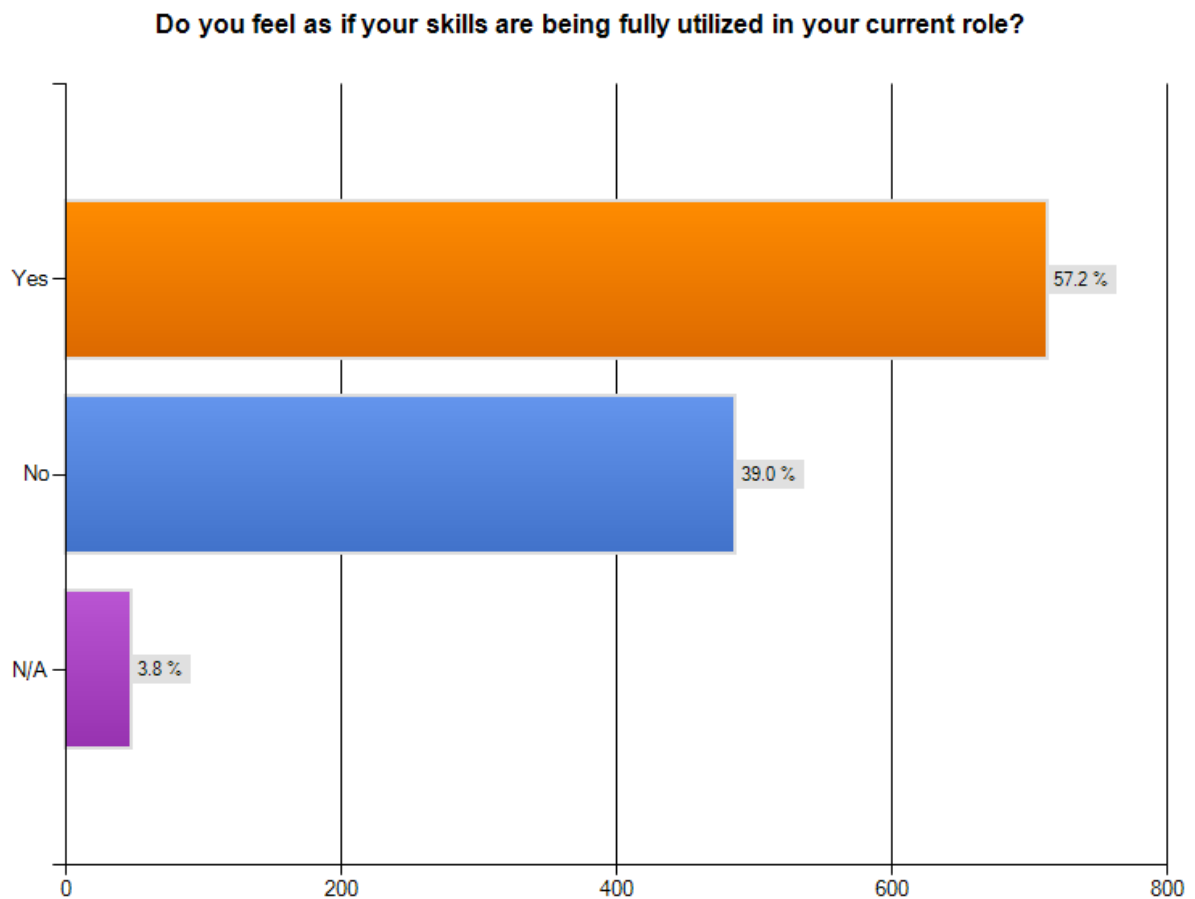
Another trend that emerged in the study is increased interaction between DBAs and application developers, with 61% of respondents saying they collaborate with application developers more than they did five years ago. This crisscross of universes is due, in part, to more production DBAs getting involved in non-production environments and traditional developers using SQL on a regular basis.



The study also revealed that both parties largely believe the other understands them and trusts their needs.

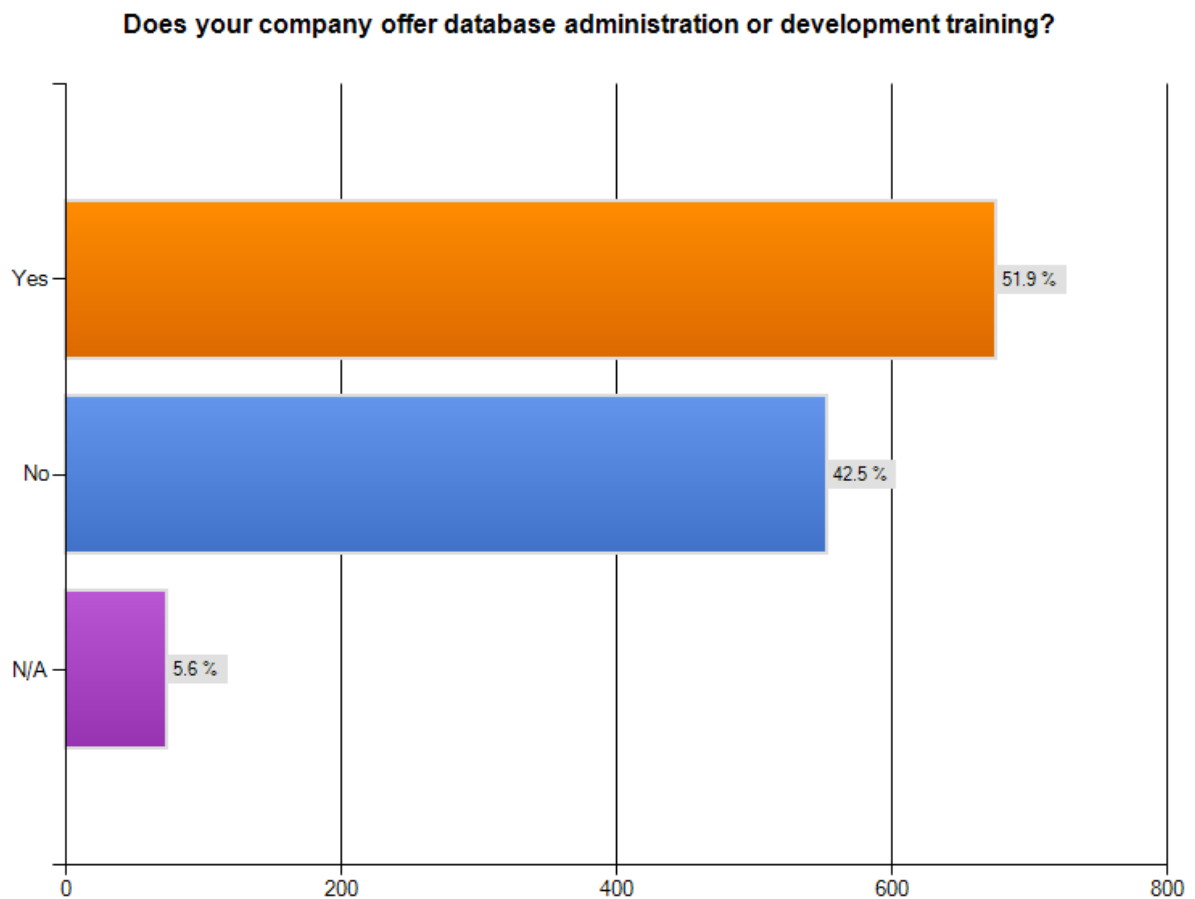


For the most part, respondents said they believe their skills are being leveraged. More than half (57%) responded in the affirmative to that question.

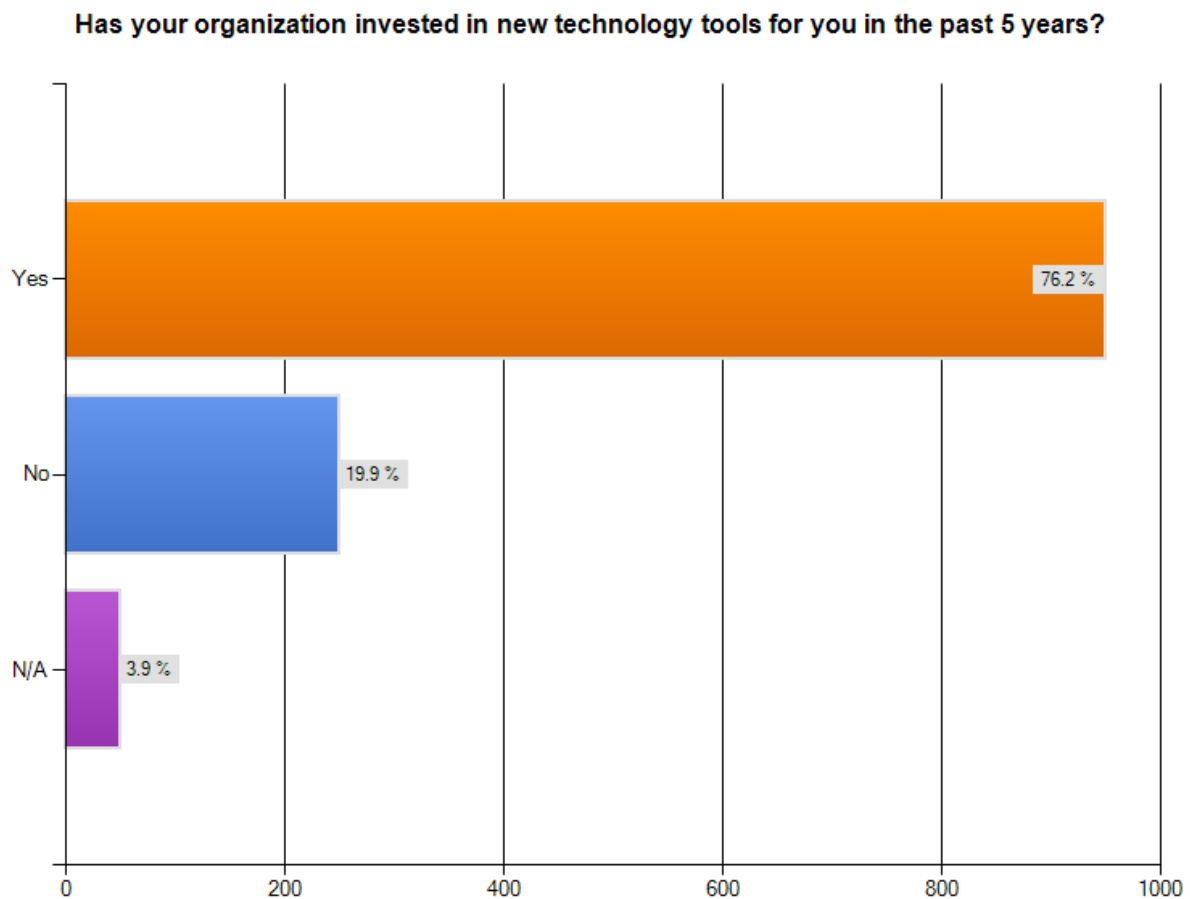




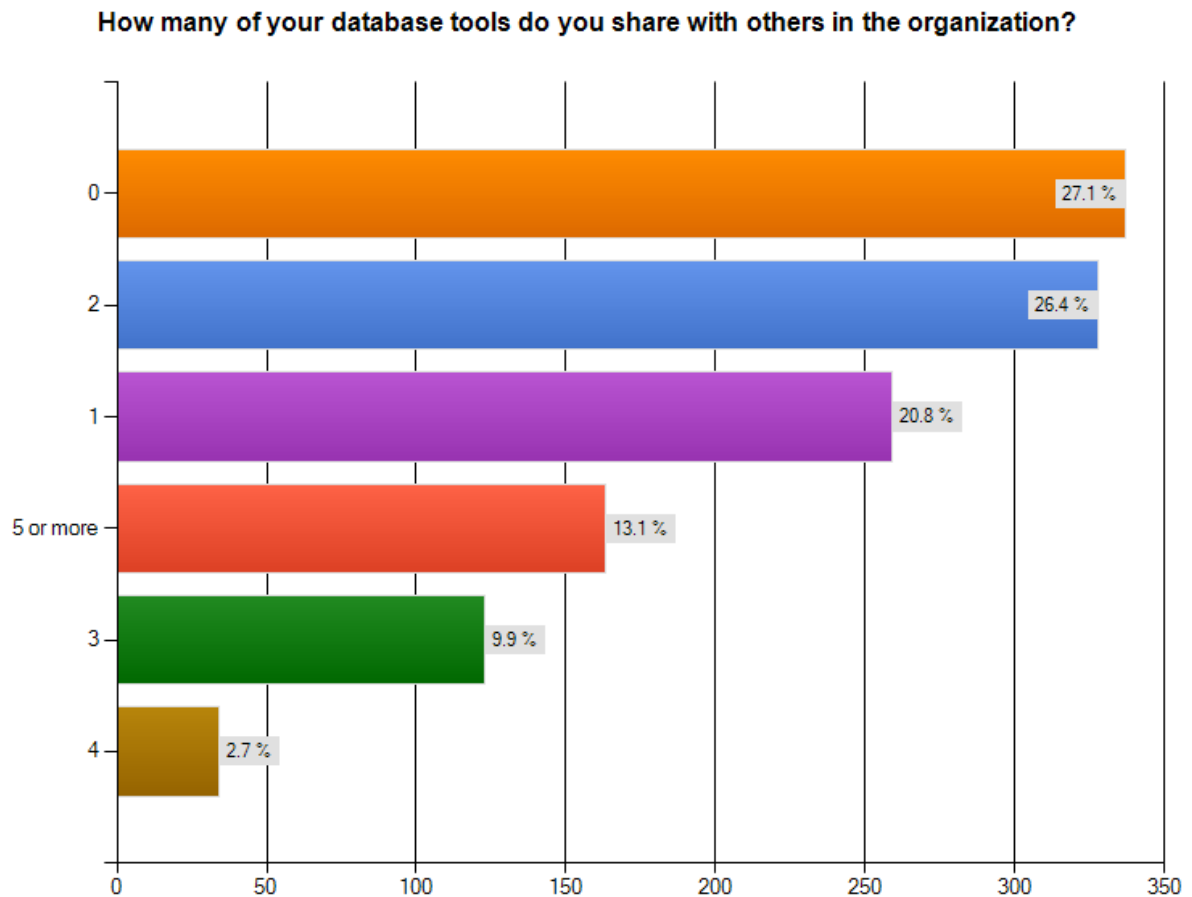
Despite the fact that the economic pinch has caused many organizations to tighten their budgets, database and developer training seems to be commonplace. More than half of respondents report that their companies offer training.



Organizations are also continuing to invest in the tools that their employees need to do their jobs. More than three quarters of respondents said their companies had invested in new technology tools for them in the past five years.

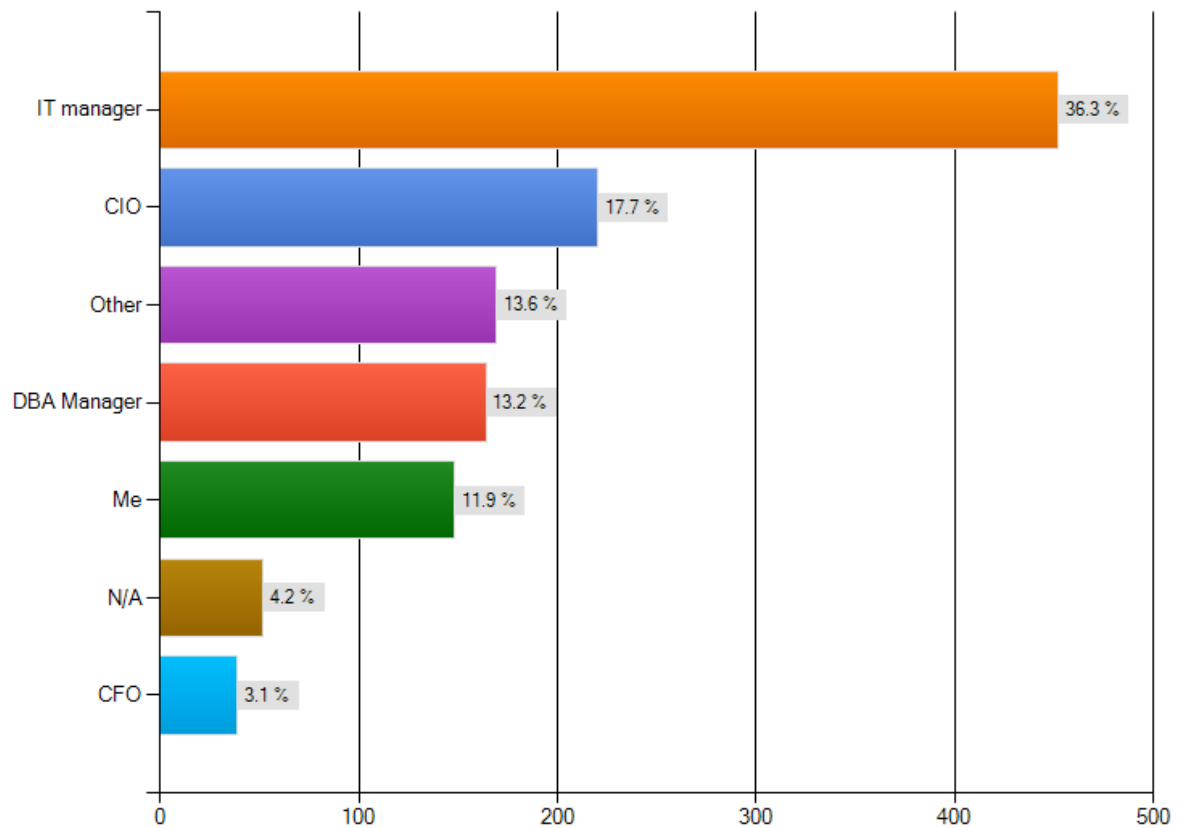


For many, tool sharing in their jobs comes along with role sharing. When asked how many database tools they share with others in their organization, 73% said they share at least one, and 13% said they share five or more.



Around 36% said their IT managers make technology tools purchasing decisions, followed by the CIO and then the database manager.

**Who makes the primary purchasing decisions on new technology tools?**





## ABOUT EMBARCADERO

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