

# THE OPEN SOURCE DEVELOPER REPORT

2011 ECLIPSE COMMUNITY SURVEY

**JUNE 2011** 

## **EXECUTIVE SUMMARY**

Eclipse is a large, vibrant, well-established open source community with over 200 open source projects, close to 1,000 committers, 170-plus member companies, thousands of companies embedding Eclipse into products and applications, and million of users. Eclipse began as a Java IDE but has evolved into a much larger and more diverse open source community. Eclipse has become a major destination for people involved in developing software that includes open source software.

In April 2011, the Eclipse Foundation undertook a survey of the Eclipse community to better understand how people are using Eclipse, using other open source software (OSS), and participating in open source communities. The purpose was to create a profile of how open source developers interact with the community.

## **Key Survey Highlights**

Among the highlights revealed by The Open Source Developer Report:

- » Hudson/Jenkins and Git/Github are quickly gaining acceptance in the Eclipse community. Usage of Git/Github has grown from 6.8% (2010) to 12.8% (2011) and Hudson/Jenkins from 21.8% (2010) to 30.8% (2011).
- » More and more people are deploying or planning to deploy applications to a cloud infrastructure. In 2011, 36% have plans compared to 29.5% in 2010. The fastest growing platform appears to be a private cloud infrastructure, growing from 16.2% (2010) to 23.1% (2011).
- » Mobile application development is becoming an important part of the Eclipse community. 60% have already developed or plan to develop mobile applications. 35% have already deployed an application to an external customer and/or an internal user. Android is the most popular mobile platform (85.3%) followed by Apple iOS (66.3%).
- » For the first time in the Eclipse Community Survey, we asked two questions to better understand who was using the Eclipse modeling projects, and how they were being used. Over 30% of the respondents responded that they were using Eclipse modeling or investigating its use. Of those using Eclipse modeling, the most popular reasons were to generate code (50.2%) and create graphical representations of models (36.8%).
- » 92.1% are satisfied or very satisfied with Eclipse.

Complete survey results are available in ods format:

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## **METHODOLOGY**

The survey was promoted to individuals who visited the eclipse.org home page during the period from April 15 to May 13, 2011. On average, the eclipse.org home page receives approximately 1 million unique visitors per month. The survey was also promoted 1) on the Eclipse Foundation forum, 2) in a blog post that also appeared on PlanetEclipse, and 3) a number of times via Twitter.

The survey was written in English and the eclipse.org website is only available in English, so the representation is limited to English-speaking users. The survey is biased to Eclipse users. However, respondents did not need to be an Eclipse user to complete the survey. Due to the large penetration of Eclipse in the Java developer community, we also believe the survey sample is a close approximation of the Java developer community.

In total 704 individuals responded to the survey and 624 completed the entire survey. The results in this report are based on the 624 completed surveys. In previous years the number of respondents was significantly higher; in 2010 we had 1,696 completed surveys. We believe a reason for the lower number of respondents is that some popular developer news sites in Germany and France had previously promoted the survey but did not promote the survey this year. This is evident by the decreased participation rate in Germany (26% in 2010 vs 18% in 2011) and France (15% in 2010 vs 7% in 2011).

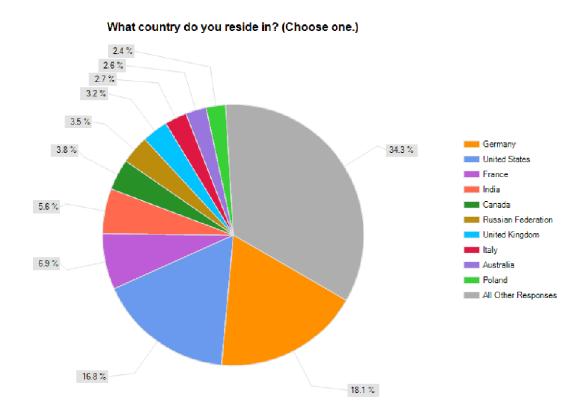
It also appears that the number of PHP developers in the respondent pool decreased substantially. In 2010, 14% claimed Eclipse PDT as their primary IDE vs 5% in 2011, while the number using Eclipse JDT increased from 53% in 2010 to 68% in 2011. There is no indication that the number of PHP developers using PDT has actually decreased or the number of Java developers using JDT has increased substantially, so a logical conclusion is that fewer PHP developers responded.

Similar surveys were conducted in August 2007, April 2009, and April 2010. The results for these surveys can be found at (2007) <a href="http://www.eclipse.org/org/press-release/20071106">http://www.eclipse.org/org/press-release/20071106</a> cbsurvey.php, (2009) <a href="http://www.eclipse.org/org/press-release/20090527">http://www.eclipse.org/org/press-release/20090527</a> survey09.php, and (2010) <a href="http://www.eclipse.org/org/press-release/20100604">http://www.eclipse.org/org/press-release/20100604</a> survey2010.php. In this report we will make comparisons among the survey results.

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## **DEMOGRAPHICS**

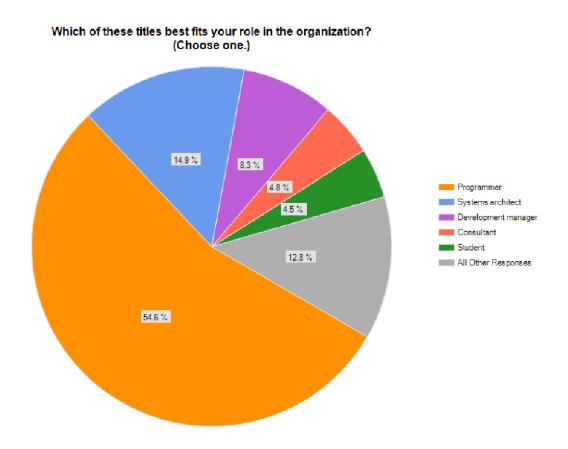
The survey respondents came from a wide range of countries; the leading countries were Germany (18.1%), USA (16.8%), France (6.9%), and India (5.6%). Based on geographical area, Europe represented 58.9% of the respondents, North America 21.6%, and Asia 14.3%.



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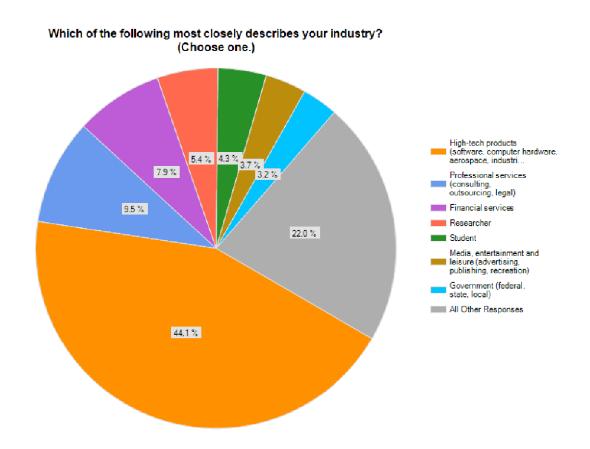
In general, the survey respondents are highly technical: 54.6% identified themselves as programmers, 14.9% as system architects, and 8.3% as development managers.

More that two-thirds (68.6%) of the respondents spend more than 17 hours a week writing code, testing, and debugging; 39.9% spend 17 to 32 hours, 21% spend 33 to 40 hours, and 7.7% spend more than 40 hours.



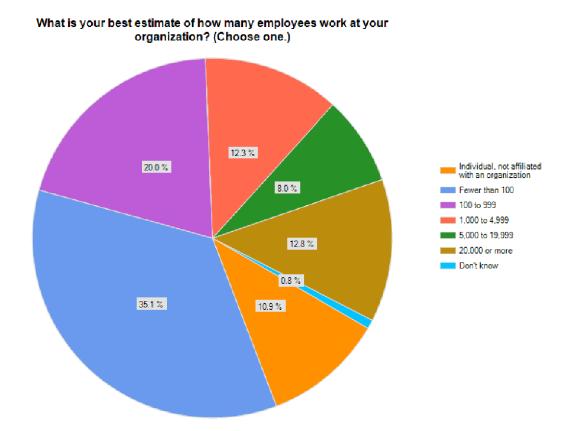
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A high proportion of the respondents work in the high-tech industry (44.1%), followed by professional services (9.5%), financial services (7.9%), and a wide assortment of other industries.



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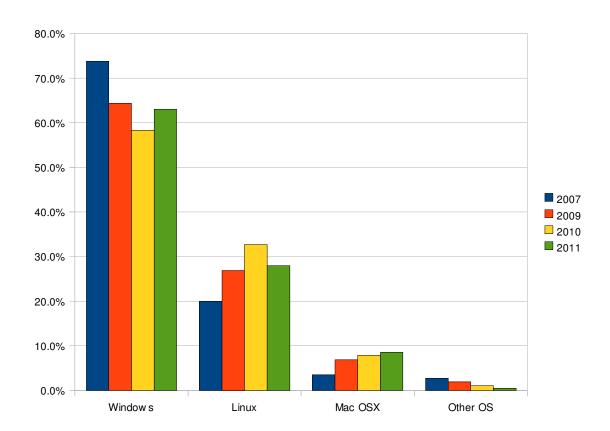
Most of the respondents work for organizations of fewer than 1,000 employees (55.1%) or consider themselves an unaffiliated individual (10.9%).



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## THE DEVELOPER DESKTOP

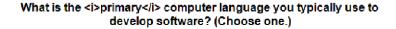
For the first time since beginning the survey, we saw an increase in the number of developers choosing Windows as their preferred operating system for development. In 2011, 63% developers indicated they are using Windows, compared to 58.3% in 2010. The change came from the number of developers using Linux; 28% in 2011 vs 32.7% in 2010. The number of developers using Macs appears to be consistent -- 8.5% in 2011 and 7.9% in 2010. The change in these numbers could be a reflection of the types of respondents, since fewer students and fewer PHP developers responded in 2011.

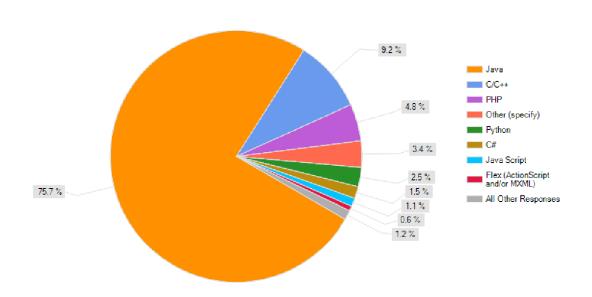


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## **Language and IDE Preference**

The most popular programming language of the respondents is Java (75.7%), followed by C/C++ (9.2%) and PHP (4.8%). Similarly, Eclipse IDEs are the most popular primary development environments among respondents: Eclipse JDT (68.3%), C/C++ Developer Tools (6.3%), and Eclipse PHP Development Tools (4.8%).



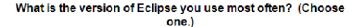


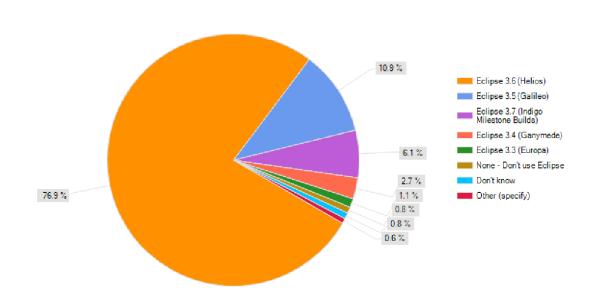
#### **Multi-language Development**

Developers tend to use more than one language for their development work. When asked to allocate their time across programming languages, Java continues to be the dominant language, but a significant number also use JavaScript (36.2%), C/C++ (32.8%), PHP (21%), and Python (20%). However, the amount of time spent writing JavaScript is considerably less than the amount spent on some of the other popular languages, indicating that developers are using JavaScript as a secondary language.

## **Eclipse Usage**

Developers tend to move to a new version of Eclipse very quickly. In less than a year, 76.9% have moved to the most recent version, Eclipse 3.6 (Helios). An additional 6.1% actually use the milestone builds of the upcoming release train.



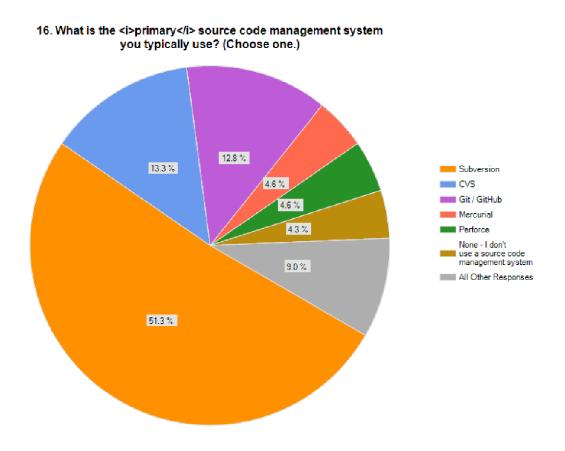


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## Tools: Source Code, Change, and Build Management

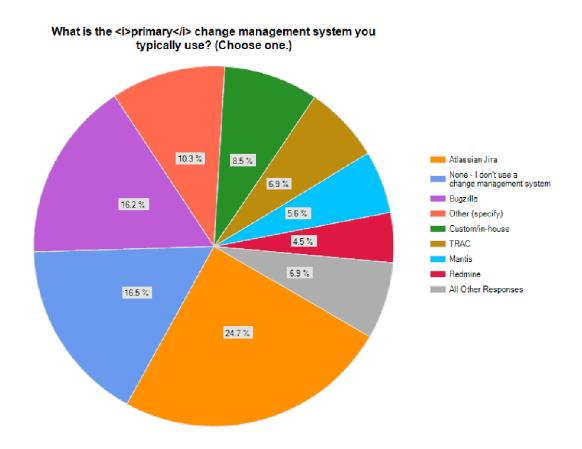
Source code management (SCM), change management (CMS), and build management (BM) are important tools for most developers. The survey asked respondents to select their primary tool in each category.

**SCM:** The dominant source code management system continues to be Subversion, used by 51.3% of respondents (compared with 58.3% in 2010). CVS is second at 13.3%. The distributed code management systems, Git and Mercurial, continue to increase in popularity. Git/GitHub increased from 6.8% to 12.8% and Mercurial increased from 3% to 4.6%.



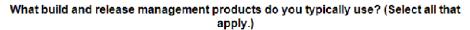
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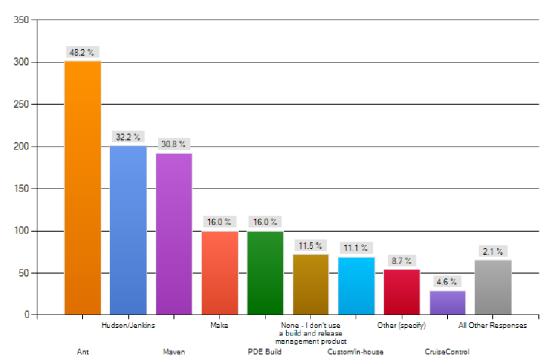
*CMS:* Atlassian JIRA (24.7%) and Bugzilla (16.5%) continue to be ranked as the most popular change management systems. The use of JIRA appears to be increasing significantly in the Eclipse community, changing from 16.3% in 2010 to 24.7% in 2011.



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**Build and Release Management:** Ant (48.2%) was the most popular build management tool, followed by Hudson/Jenkins (32.2%) and Maven (30.8%). Hudson/Jenkins appears to be gaining popularity, moving from 21.8% in 2010. Respondents were able to select multiple tools, so the numbers don't add to 100%.

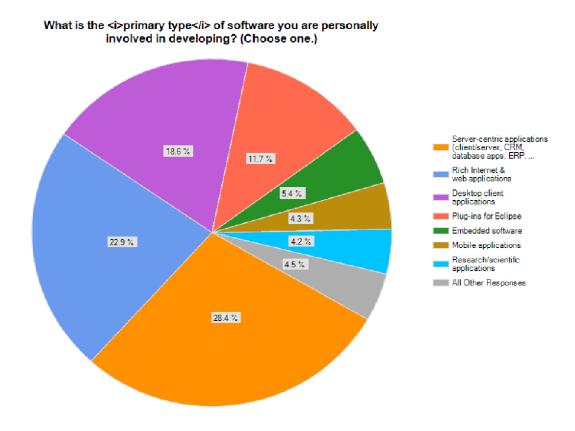




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## **APPLICATION STYLE**

The types of applications respondents are developing tend to be server-centric (28.4%), web (22.9%), and desktop applications (18.6%). In general this is consistent with the 2010 survey results.

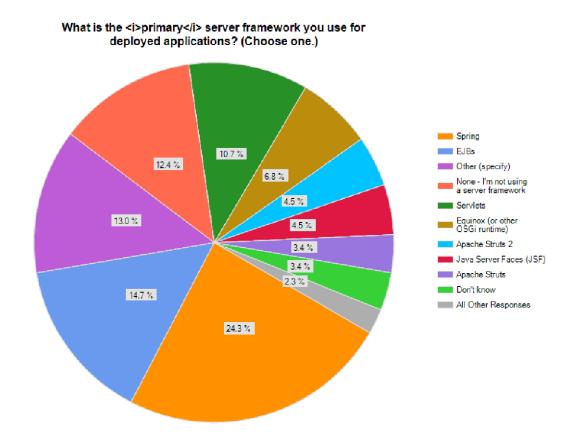


The survey then asked respondents in each of these three main categories to identify which software programs they use to develop their specific applications.

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## **Server-Centric Applications**

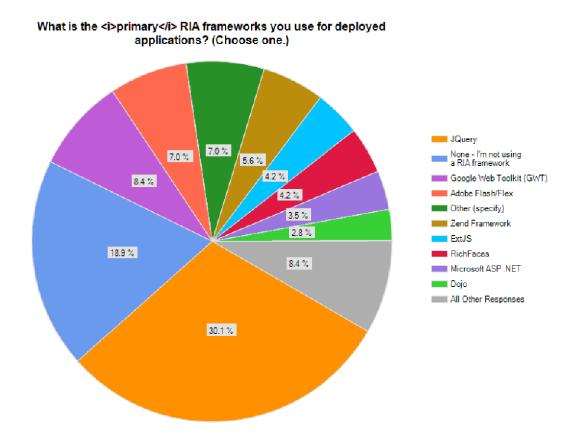
For server-centric application development, the popularity of Spring appears to continue to increase, moving from 19.7% (2010) to 24.3% (2011).



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## Web and Rich Internet Applications

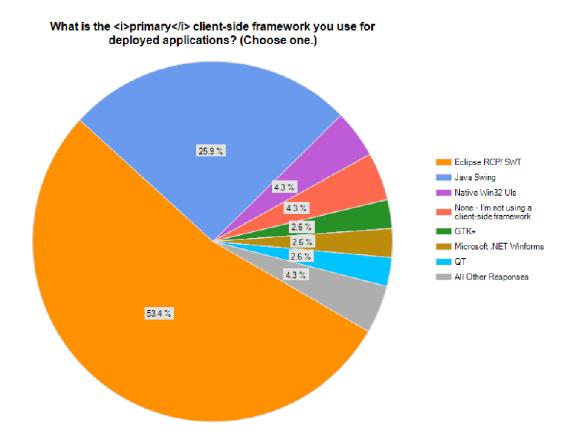
For Web/RIA applications, JQuery continues to be the most popular framework at 30.1%, an increase from 26.2% in 2010.



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## **Rich Desktop Applications**

For rich desktop applications, Eclipse RCP was the most popular framework (53.4%), followed by Java Swing (25.9%).

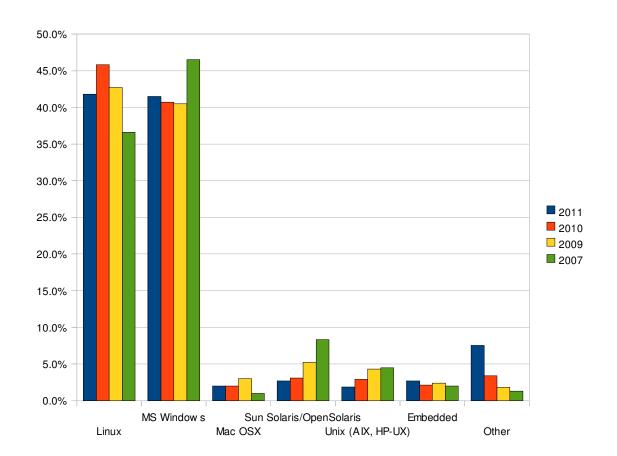


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## THE DEPLOYMENT ENVIRONMENT

Developers need to deploy their applications into a production deployment environment. The survey asked respondents about the primary operating system and application server they use to deploy their applications.

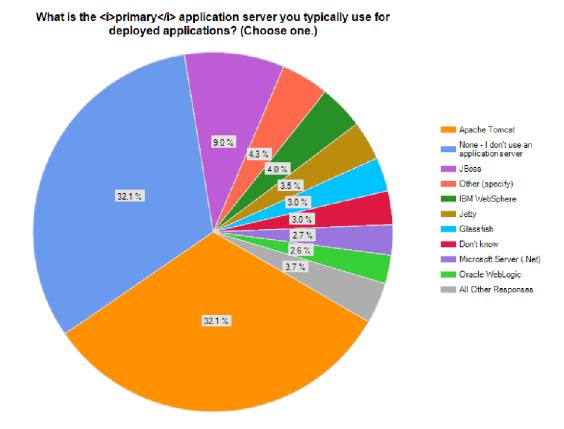
Linux continues to be the most popular deployment operating system at 41.8%, followed by Windows at 40.7%.



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## **Primary Application Server**

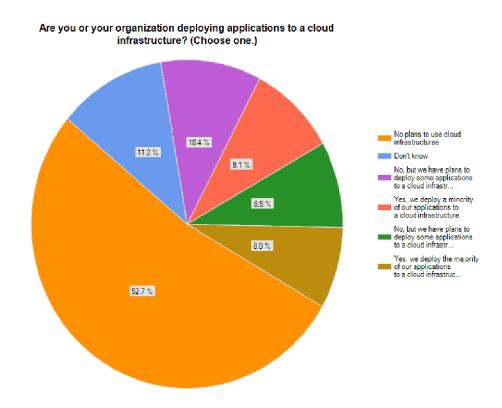
Apache Tomcat continues to be the dominant application server with 32.1%.



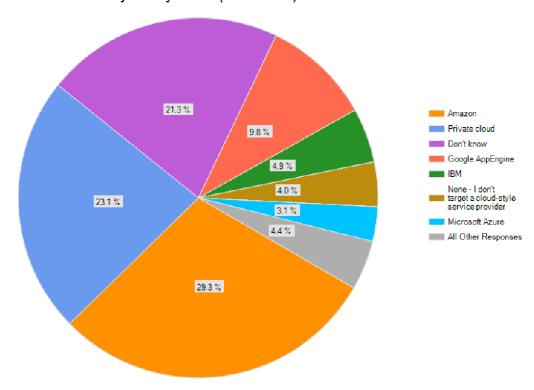
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## **CLOUD COMPUTING**

Survey respondents were asked about their organization's plans for deploying applications to a cloud infrastructure. The number of people who have already deployed applications or are planning to deploy to the cloud has increased from 29.5% to 36%. Amazon continues to be the most popular destination for cloud deployments, with 29.3% indicating this as the cloud infrastructure they are most likely to use. Interestingly enough, using a private cloud was the second choice at 23.1% (an increase from 16.2% in 2010), Indicating the rising importance of private cloud deployments.



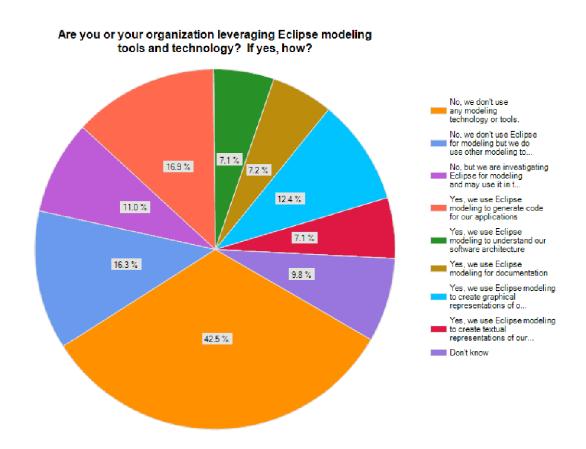
## If you are or have plans to use a cloud infrastructure, which service are you likely to use? (Choose one.)



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## **MODELING**

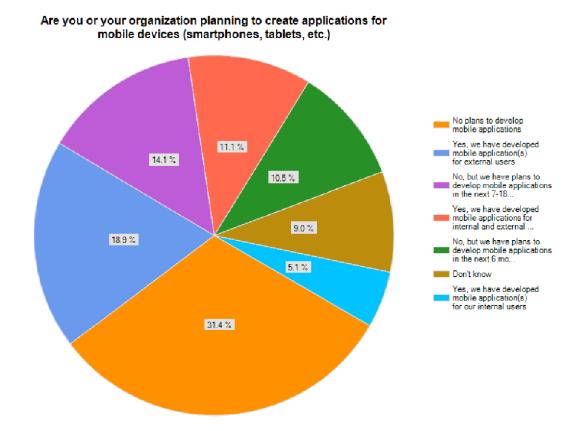
Eclipse has a large and diverse collection of open source projects that implement modeling technology. For the first time in the Eclipse Community Survey, we asked two questions to better understand who is using the Eclipse modeling projects and how the projects are being used. Over 30% of the respondents answered that they are using Eclipse modeling or investigating its use. Of those using Eclipse modeling, the most popular reasons were to generate code (50.2%) and create graphical representations of models (36.8%).



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## **MOBILE COMPUTING**

For the first time, the Eclipse Community Survey asked respondents about their plans for applications on mobile devices. A majority, 60% of respondents, have already developed or plan to develop mobile applications. 35% have already deployed an application to an external customer and/or an internal user.

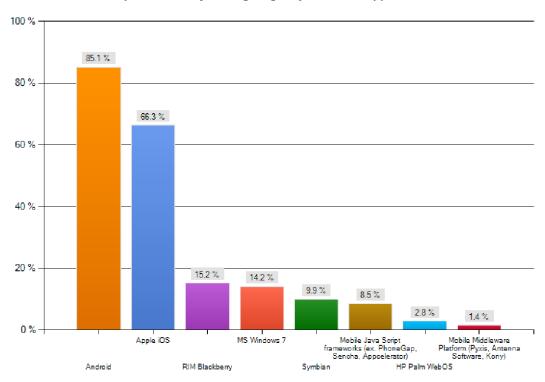


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#### **Mobile Platforms**

Respondents were asked to indicate which mobile platforms they are targeting. Android was easily the most popular platform (85.1%) followed by Apple iOS (66.3%). Interestingly, the popularity of mobile middleware and mobile frameworks is still limited.

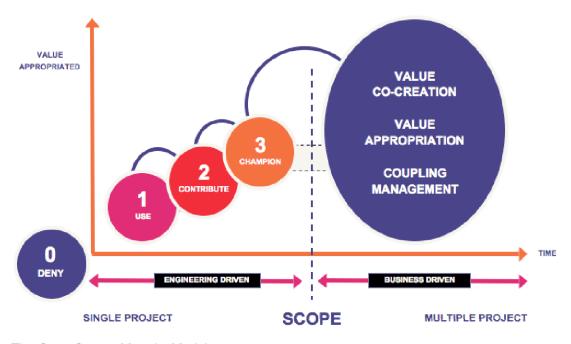
#### What platforms are your targeting for your mobile applications?



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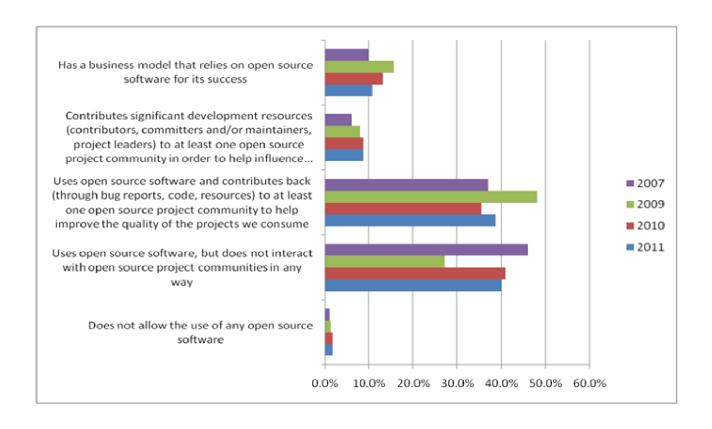
## **OPEN SOURCE MATURITY**

The Eclipse Foundation uses an Open Source Maturity model to explain how organizations perceive and participate in an open source community. Over time, an organization moves from denial of open source, to usage, to modest contribution, to leading and championing.



The Open Source Maturity Model

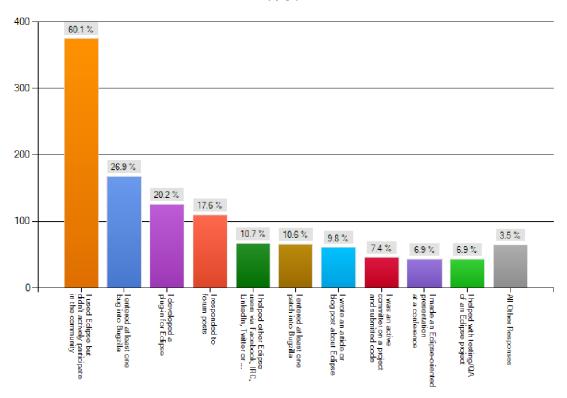
In comparison to 2010, there has not been a lot of change in how organizations view their open source participation. A large minority (40.1%) continue to use open source but do not participate in the open source community. An almost equal number (38.7%) use open source and have a limited amount of participation in an open source project.



## **ECLIPSE COMMUNITY PARTICIPATION**

The survey also looked at the perception of and participation within the Eclipse community. The most common ways to participate are opening a bug (26.9%), developing a plug-in (20.2%), and responding to a forum post (17.6%). Overall participation appears to be up in the community. The number of people not actively participating decreased from 63.5% (2010) to 60.1% (2011).

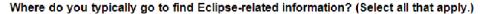
# In the last year, how have you participated in the Eclipse community? (Select all that apply.)

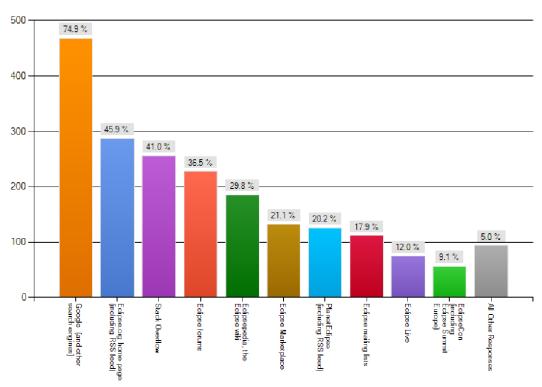


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## Sources of Eclipse-related Information

Google (and other search engines) continue to be the most important source of Eclipse related information, followed by the eclipse.org home page. Of interest this year was the popularity of Stack Overflow as a source of Eclipse related information, even more popular than Eclipse forums. Also rising significantly in popularity is Eclipse Marketplace, going from 9.8% in 2010 to 21.1% in 2011.

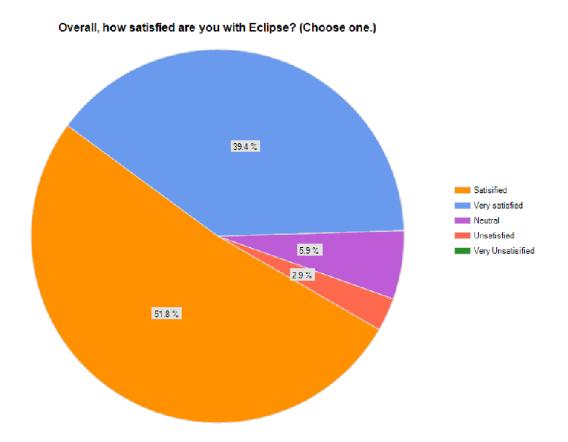




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## **Overall Satisfaction**

Overall satisfaction remains high in the Eclipse community. 51.8% are generally satisfied with Eclipse; 91.2% are satisfied or very satisfied with Eclipse, a slight increase from the 88.4% approval rating in 2010. Congratulations to everyone!



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