THE OPEN SOURCE DEVELOPER REPORT

2009 ECLIPSE COMMUNITY SURVEY

MAY 2009

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EXECUTIVE SUMMARY

Eclipse is a large, vibrant, well established open source community with over 100 open source projects, 1,000 committers, 170 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 2009, the Eclipse Foundation undertook a survey of the Eclipse community to better understand:

- » How people are using Eclipse and other open source software (OSS); and
- » How people participate in and perceive open source software.

The purpose was to create a profile of how open source developers interact with the community.

A similar survey was conducted in August 2007 by IDC, in conjunction with The Eclipse Foundation. The results of this survey, which can be found at http://www.eclipse.org/org/press-release/20071106_cbsurvey.php, provide an opportunity to look at changes and trends over the last two years.

Key Survey Highlights

Among the highlights revealed by The Open Source Developer Report

- » Linux is gaining share on the desktop and server. Developers appear to be shifting away from Microsoft Windows to Linux and Mac OSX for their desktop development operating system. Linux is now the most common deployment operating system.

- » MySQL and Oracle are the dominant databases on which applications are deployed, totaling 55%.

- » Subversion is the dominant Source Code Management system used by developers, with 57.5%.

» Organizations are progressing positively along the OSS Maturity Model:

  ▪ More organizations are allowing use of open source software *and* participation. 48.2% of respondents reported this for their company, compared to 37% in 2007.

  ▪ 15.6% state that their company has a business model reliant on OSS today, versus only 10% two years ago.

» 89.1% are satisfied or very satisfied with Eclipse.

Complete survey results are available at http://eclipse.org/go/Survey_09.

METHODOLOGY

The survey was promoted to individuals who visited the eclipse.org home page during the period of April 14 - May 15, 2009. 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 newsgroup, 2) in a blog post that also appeared on PlanetEclipse, and 3) a number of times via Twitter.

Heise.de, a leading German technology news site, published an article about the survey that resulted in a larger proportion of respondents from Germany. However, an analysis of the results from German respondents does not show any significant difference in the overall results.

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 to the Java developer community.

In total 1,481 individuals responded to the survey and 1,365 completed the entire survey. The survey can be found at: http://eclipse.org/go/Survey_09.

In August 2007, IDC executed a survey in a similar manner on the eclipse.org website. We believe the sample of the two surveys is significantly similar to allow for comparisons.

DEMOGRAPHICS

Over half of respondents identify themselves as programmers. Eclipse began as IDE for Java programmers, and though the ecosystem around it has been extended in several ways, Eclipse remains an important productivity tool for programmers. The full breakdown of survey respondents is as follows:
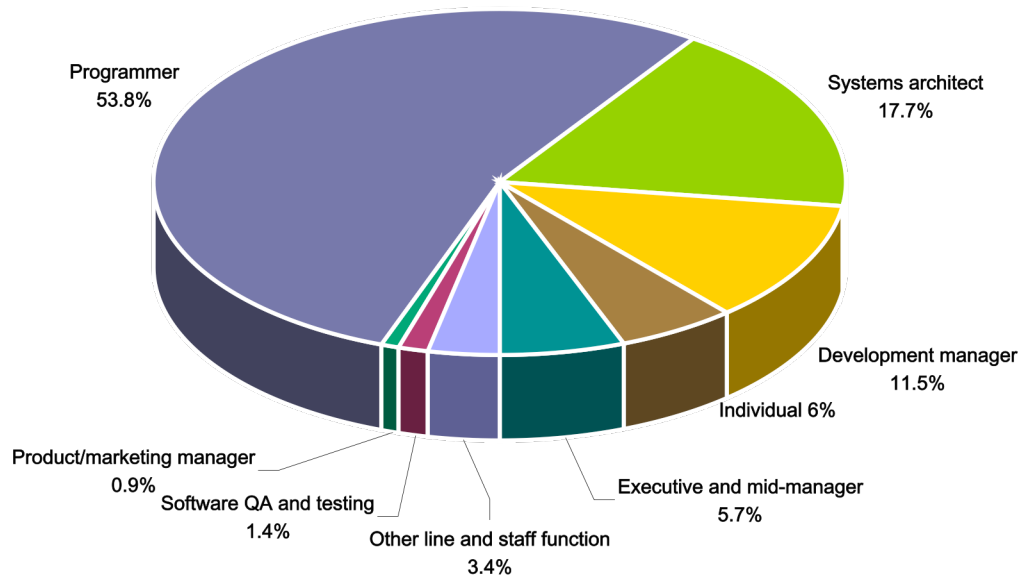
Chart 1: Which of these titles best fits your role in the organization? (Choose one.)

Half the respondents identified themselves as working in the high-tech or the professional services/consulting industry.
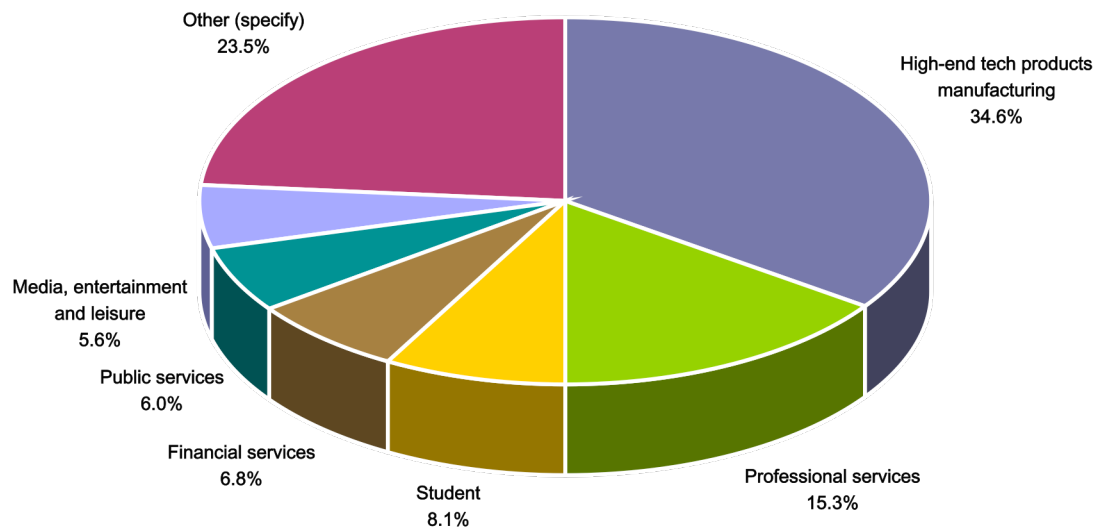
Chart 2: Which of the following most closely describes your industry? (Choose one.)

The breakdown by size of the organization reflects a bias towards small to midsize businesses (SMBs).
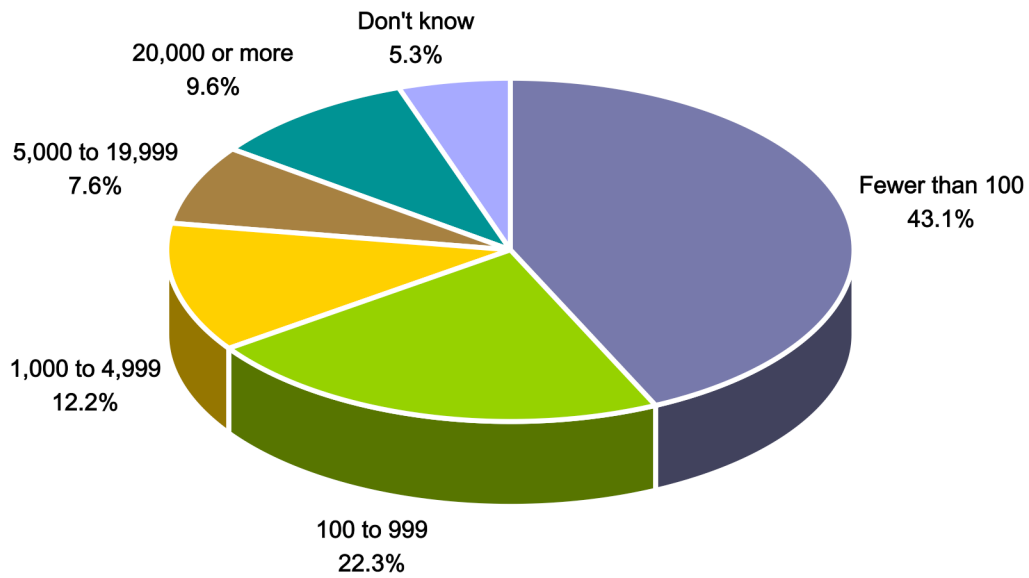

Chart 3: What is your best estimate of how many employees work at your organization?

Developers appear to be shifting away from Microsoft Windows to Linux and Mac OSX for their development operating system. 26.9% of respondents cite Linux was as primary desktop operating system, representing a 7 percentage point increase from 2007. Though Windows is still the dominant development OS at 64%, it has decreased 10 percentage points from 2007. The most popular Linux variant of choice among developers is Ubuntu, which accounts for over half of Linux respondents. Mac OSX has increase to 6.9% from 3.5% in 2007.
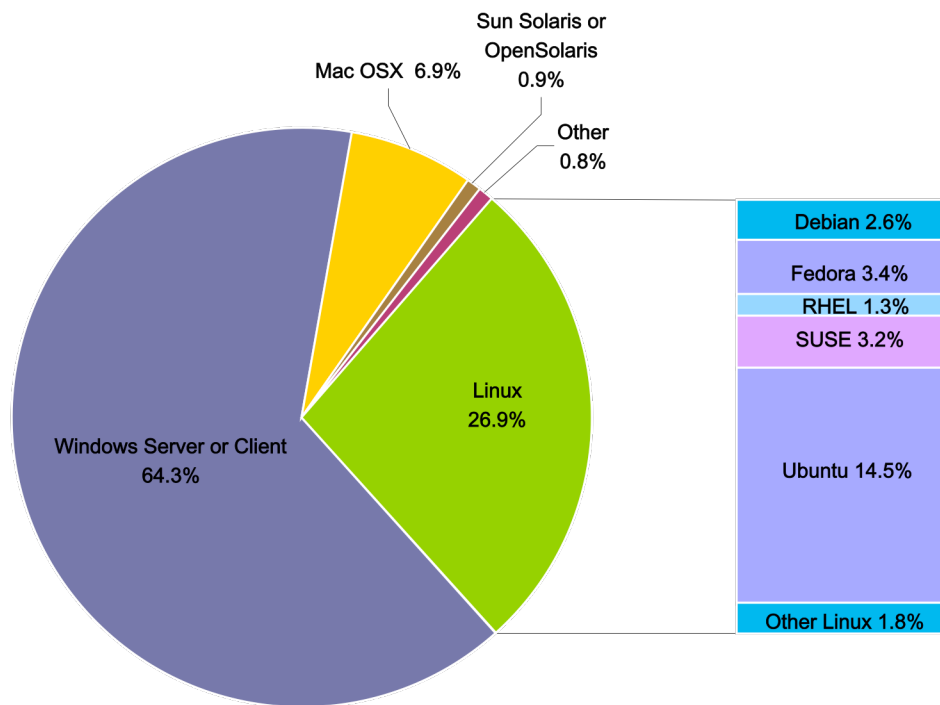

Chart 4: What is your primary operating system for software development? (Choose one.)

IDE Preference

Eclipse IDEs are the most popular primary development environments among respondents; Eclipse JDT (60%), Eclipse PHP Development Tools (12.6%) and C/C++ Developer Tools (6.3%). This is not surprising given the survey sample.

When we asked about secondary development IDEs, more than 80% report using a secondary IDE, which supports the conventional wisdom that developers use multiple IDEs. However, the distribution of secondary IDE is less concentrated; developers are choosing a wider range of Eclipse-based and non Eclipse-based IDEs.
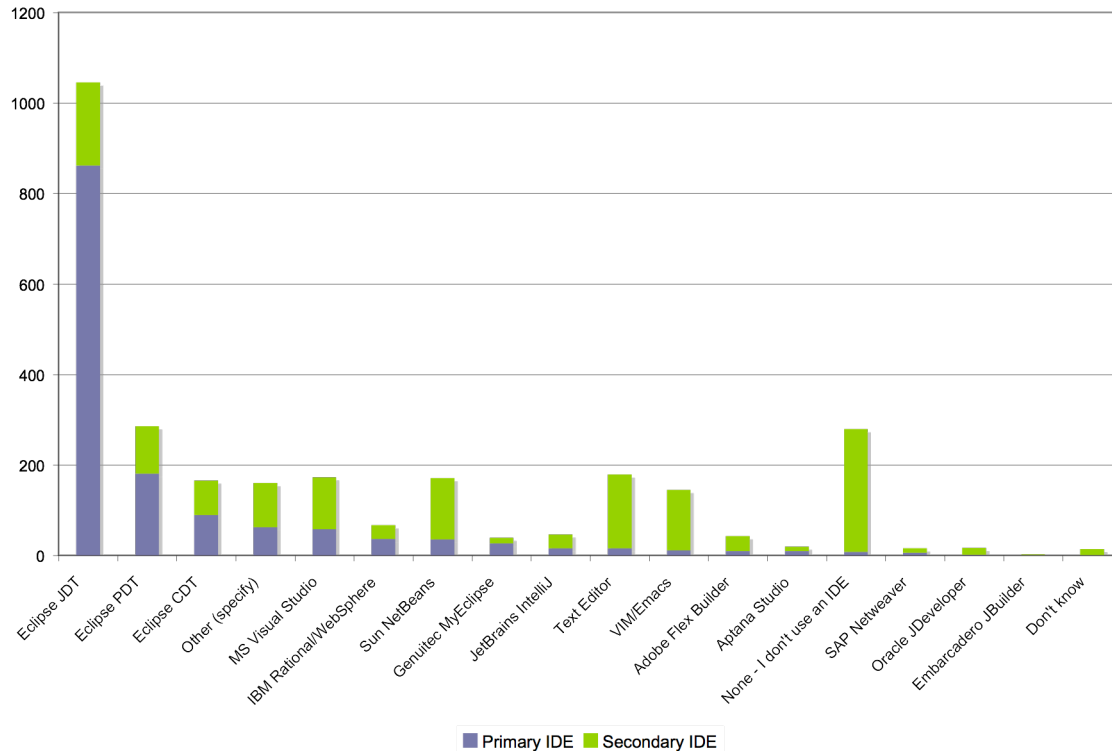

Chart 5: What is your primary development environment (IDE)? What is your secondary IDE? (Choose one each.)

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 is Subversion, which is used by 57.5% of respondents. CVS comes in at 20%, with the remaining spread out among a wide variety of open source and commercial tools.

For larger companies (more than 5,000 employees) the use of Subversion decreases significantly to 41.3%, while products like IBM Rational Clearcase increase from 3.8% to 9.1% and Perforce from 2.7% to 6.2%.
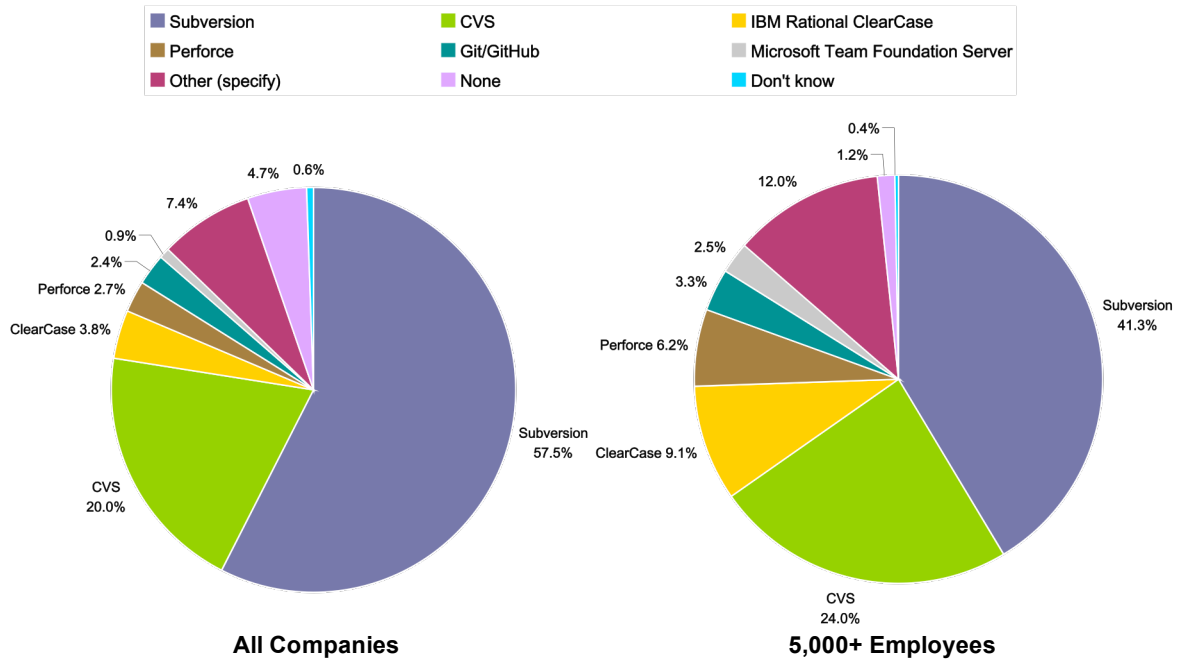
All Companies

Subversion	Subversion 57.5%
CVS	CVS 20.0%
IBM Rational ClearCase	ClearCase 3.8%
Perforce	Perforce 2.7%
Git/GitHub	0.9%
Microsoft Team Foundation Server	2.4%
Other (specify)	7.4%
None	4.7%
Don't know	0.6%

5,000+ Employees

Subversion 41.3%
CVS 24.0%
ClearCase 9.1%
Perforce 6.2%
3.3%
2.5%
12.0%
1.2%
0.4%

Chart 6: What is your primary source code management system you typically use? (Choose one.)

CMS: Atlassian JIRA and Bugzilla ranked as the most popular at about 17% each. However, 22.7% reported not using a CMS tool. Interestingly, TRAC (7.2%) and MANTIS (5.3%) accounted for more than half of the specified "Other" CMS tools, making them the third and fourth most popular CMS tools, respectively.
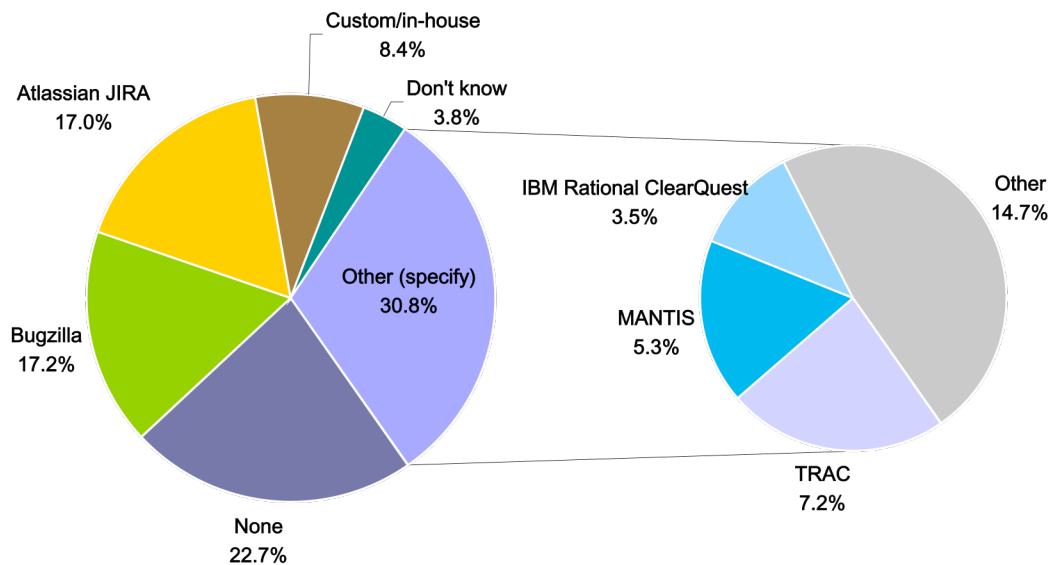

Custom/in-house 8.4%
Atlassian JIRA 17.0%
Don't know 3.8%
Bugzilla 17.2%
Other (specify) 30.8%
None 22.7%

IBM Rational ClearQuest 3.5%
Other 14.7%
MANTIS 5.3%
TRAC 7.2%

Chart 7: What is the primary change management system you typically use? (Choose one each.)

Build and Release Management: Ant (33.4%) was the most popular build management tool, followed by Maven (18%) and Hudson (9.1%) Again, more than 20% claimed they did not use a build management tool.
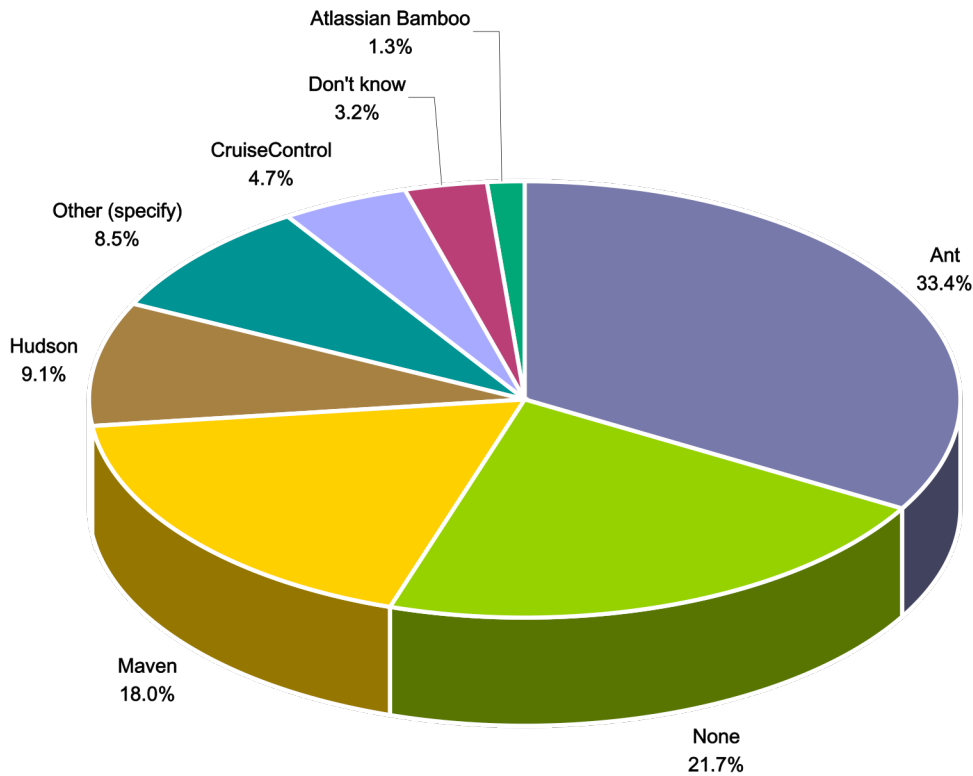

Chart 8: What is the primary build and release management product you typically use? (Choose one each.)

Java is the dominant language being used by the community; 76.6% specify it is their primary development language. The types of applications respondents are developing tend to be server-centric (30.2%), web (24.7%), and desktop applications (23.4%).
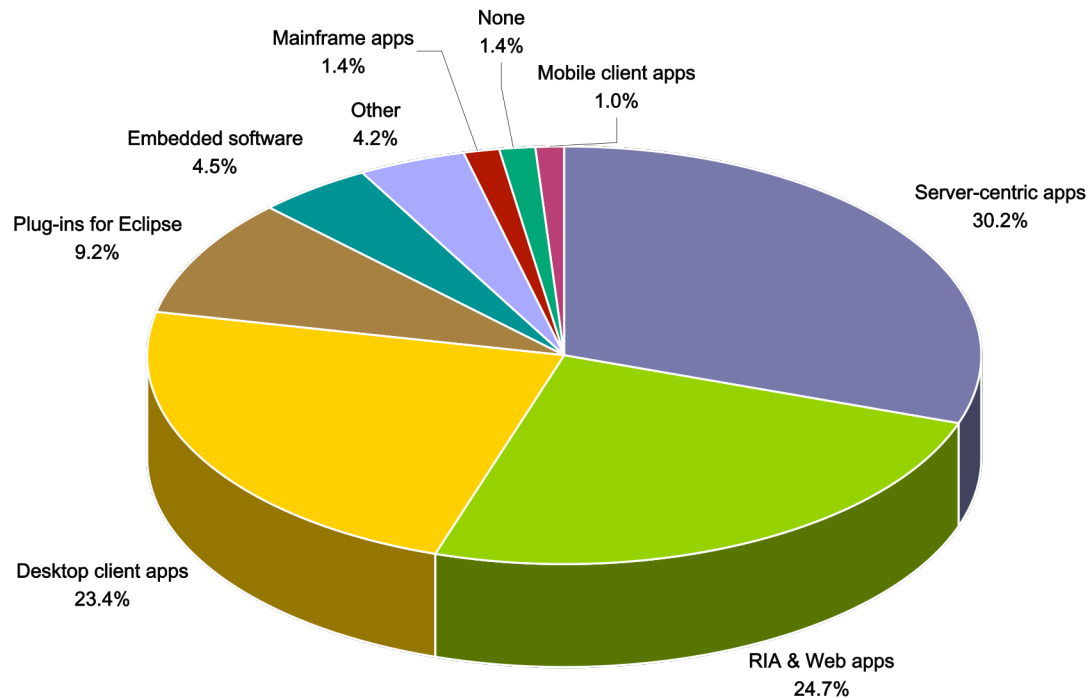

Chart 9: What is the primary type of software you are developing? (Choose one.)

The survey then asked respondents in each of these three main categories to identify which software programs they use to develop their specific applications. Respondents were asked to select all that applied, with an option to write in additional tools.

Server-Centric Applications

For server-centric application development, respondents overwhelmingly rely on servlets, which was cited in 64.7% of the responses. For specific tooling, the preferred framework is Spring, which appears in half of the responses. EJBs also had a strong showing with 38.3%. Examples of server-centric apps are J2EE apps, database apps, ERP, and CRM.
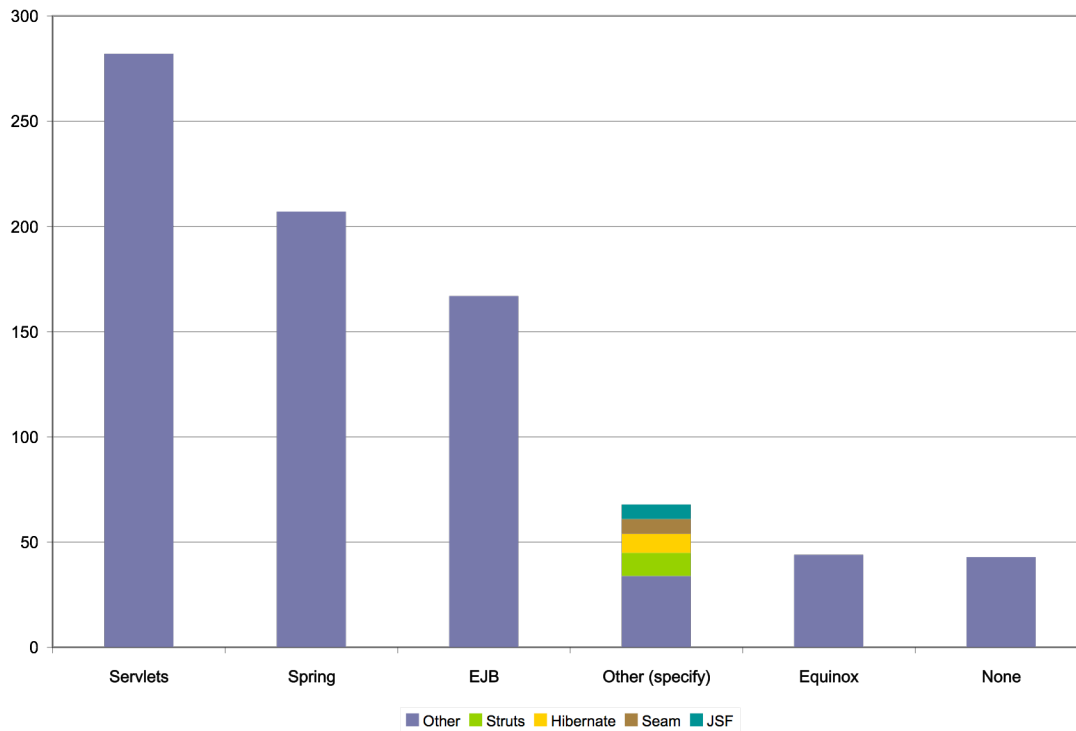

Chart 10: What platforms are you using for creating server-centric software? (Select all that apply.)

Web and Rich Internet Applications

When it comes to Web and rich Internet applications (RIAs), however, developers' choice of frameworks is widely distributed, demonstrating a degree of fragmentation in this tools segment. The majority of responses (41.9%) were write-ins citing other tools such as Spring, JQuery, and even homegrown custom frameworks. Open source Ajax frameworks are a popular second choice among developers, though unspecified. Flash/Flex, Dojo, and GWT also had strong showings.
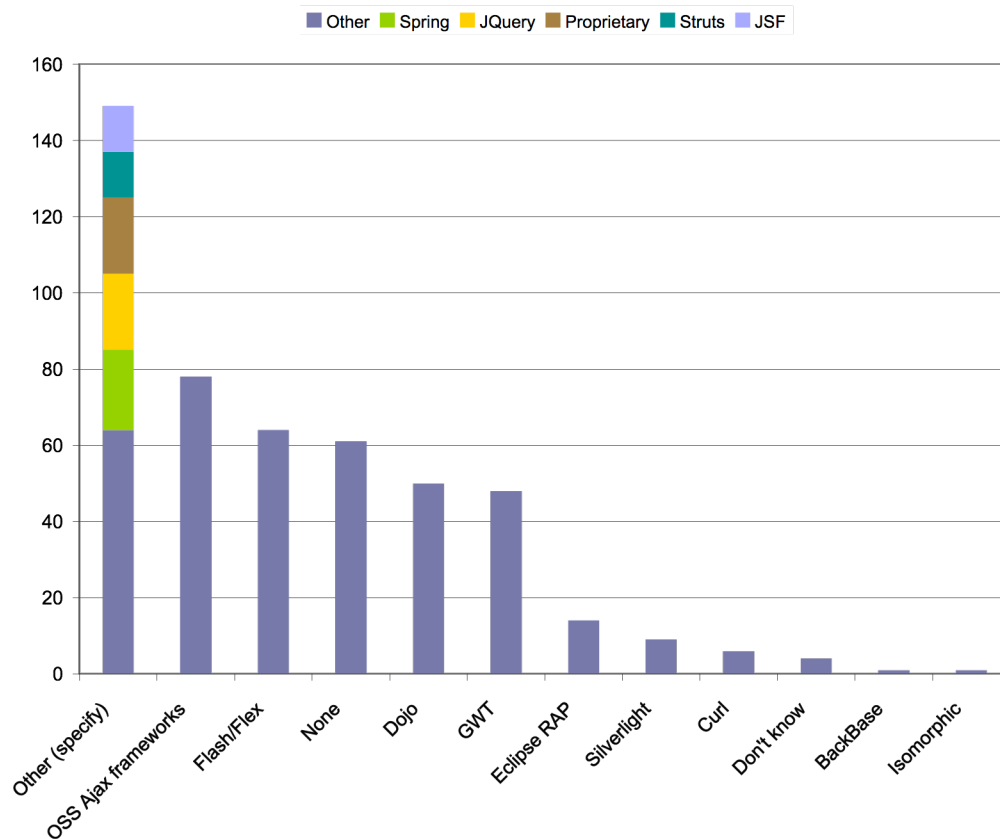

Chart 11: What frameworks are you using to create Rich Internet & Web Applications? (Select all that apply.)

Rich Desktop Applications

For rich desktop applications, developers' usage of Eclipse RCP (47.6%) and Swing (43.8%) were evenly split, which demonstrates a strong bias toward Java development.

THE DEPLOYMENT ENVIRONMENT

Developers need to deploy their applications into a production deployment environment. The survey asked about the primary operating system, database, and application server that were used to deploy their applications.

Linux is taking an increase share of the deployment operating system environment. 42.7% of the respondents selected Linux as their deployment environment; an increase from 37% in 2007. Ubuntu (12%) and Red Hat Enterprise Linux (10.2%) are the leading Linux distros. Similar to the developer desktop, there has been a decrease in the use of Windows as a deployment environment from 47% in 2007 to 40.5% in 2009. Also, there appears to have been a decrease in the use of Sun Solaris/OpenSolaris as a deployment environment from 8% in 2007 to 5.2% in 2009.
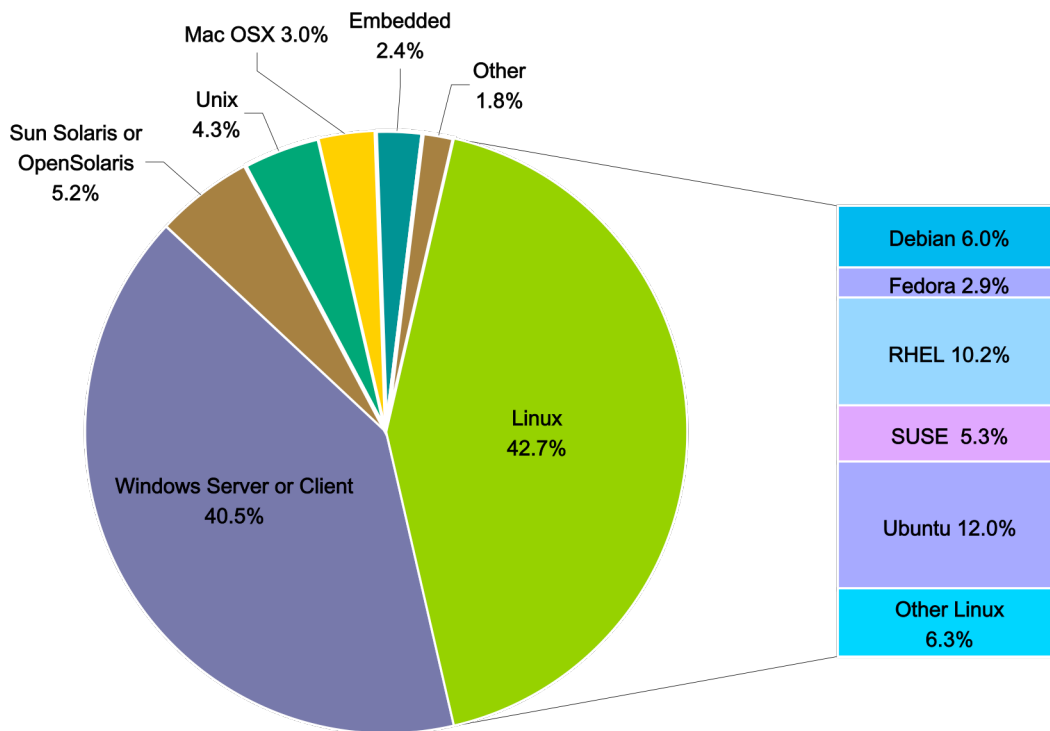

Chart 12: What is your primary operating system for software deployment? (Choose one.)

Primary Database

The primary database used for deployment was evenly split between MySQL and Oracle at 27.7% and 27.3%, respectively. Given the recent Oracle acquisition of Sun Microsystems (and the MySQL portfolio), this represents an interesting consolidation of database providers. For large companies that have more than 5,000 employees, the use of MySQL significantly drops to 11.6%, while Oracle rises to 33.5% and IBM DB2 increases to 10.7% from 6.2%.

A further analysis of the respondents using Oracle and MySQL databases shows two different profiles of users: 1) Oracles DB users tend to be building Java server based applications, and 2) MySQL users more RIA, LAMP style applications.

Oracle DB users are:
  » Much more likely to be using Java as their primary development language (90.4% for Oracle DB users vs. 76.6% for all respondents)
  » Creating server-centric applications (51.8% for Oracle DB vs. 30.2% for all).
  » Much more likely to use an application server (only 6.5% of Oracle DB users claimed they did not use an application server vs. 25.3% for all)

MySQL users are more likely to:
  » Use PHP as their primary language (17.4% of MySQL users say PHP is their primary language vs. 5.4% for all)
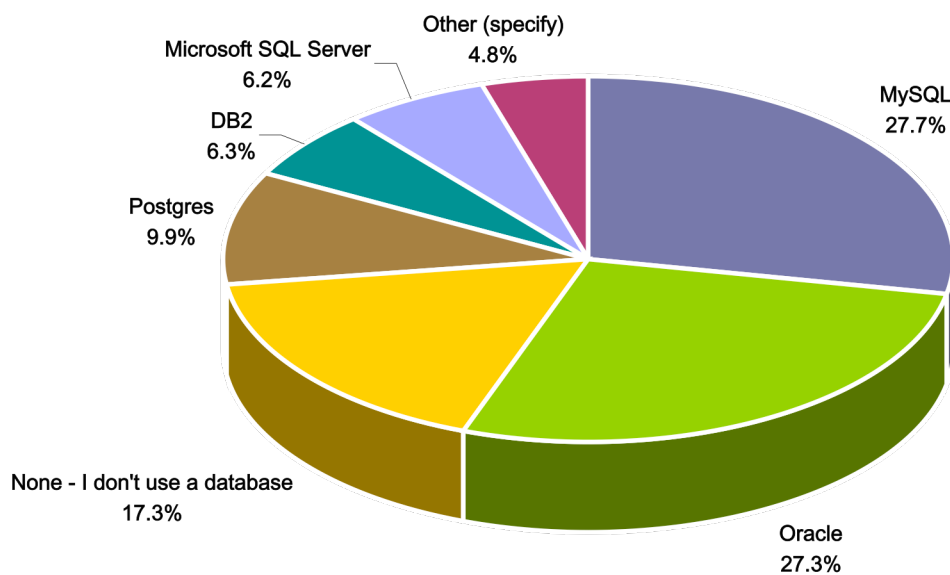 » Create RIA/Web Applications (39.1% of MySQL users develop RIA/Web Applications vs. 24.7%)

Chart 13: What is the primary database you typically use for deployed applications? (Choose one.)

Primary Application Server

Finally, in the application server tier, the majority deploy on Apache Tomcat (34.8%), followed by JBoss (12.7%). For large companies (more than 5,000 employees) the use of Tomcat decreases to 26% and JBoss to 8.3 while IBM WebSphere increases to 12% and Oracle WebLogic nearly doubles to 7.9
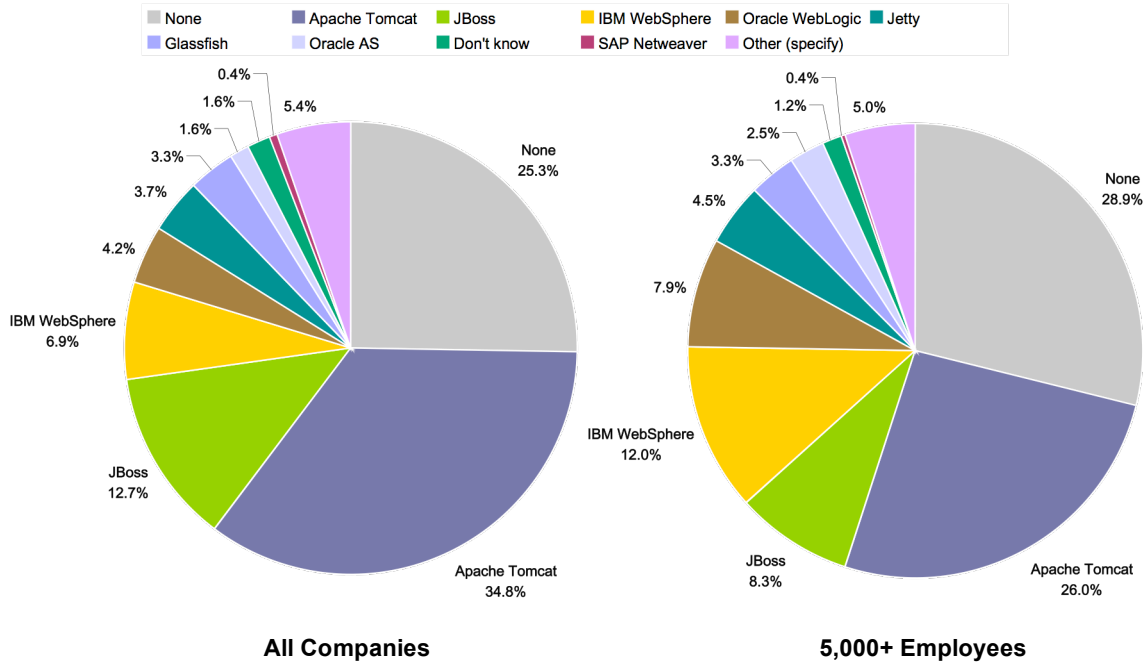

Chart 14: What is the primary application server you typically use for deployed applications? (Choose one.)

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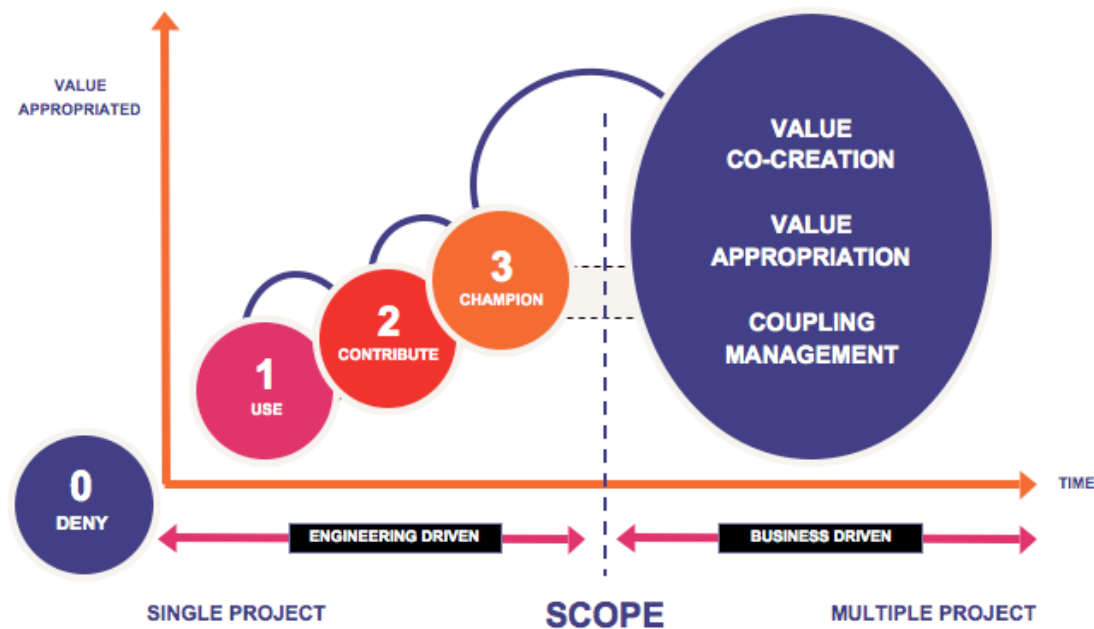

Chart 15: The Open Source Maturity Model

Over the last two years, the survey results show that organizations are becoming more open to participating in open source software. When asked which best describes their organization's approach to OSS, individuals affiliated with an organization showed a distinct maturing in their OSS participation.

In 2007, 46% were allowed to use OSS but could not contribute back; now this group has decreased to only 27%. In contrast, 48.2% of respondents are now allowed by their company to use and contribute back to OSS communities—a significant increase from 37% in 2007. How much OSS impacts an organization has changed as well. 15.6% of respondents report that their organization relies on OSS as a business model, an increase from 10% in 2007.
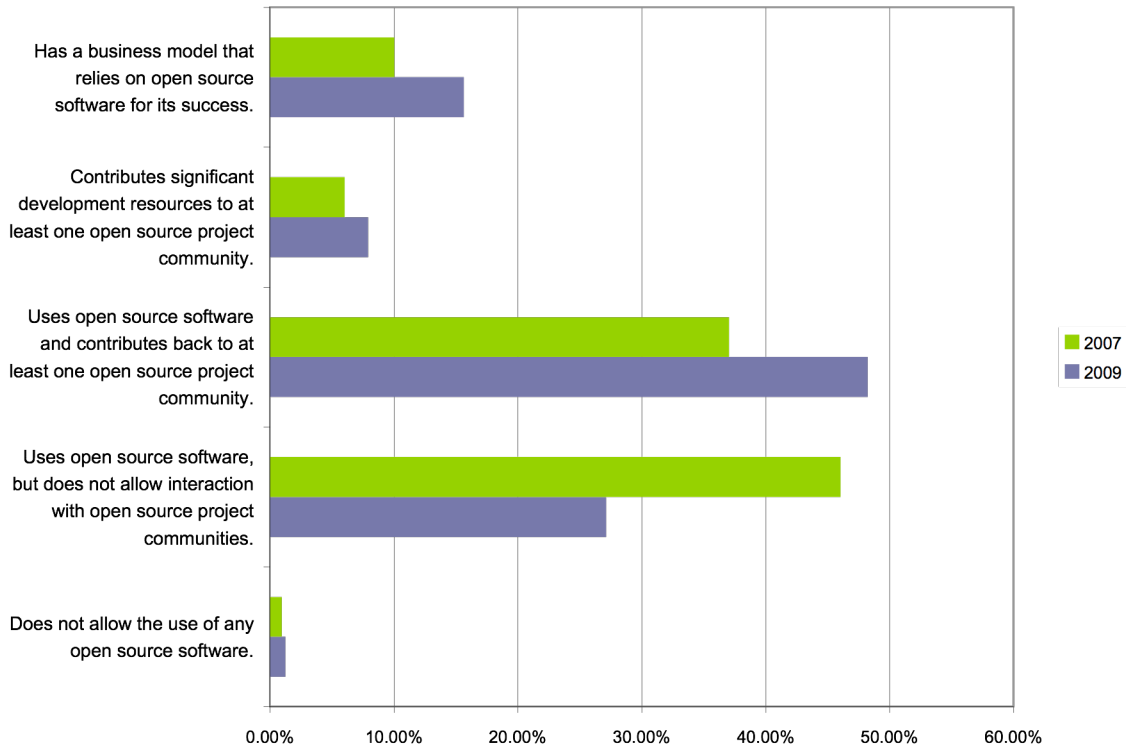
Chart 16: What best describes your organization's policy towards the use of open source software? (Choose one.)

The survey also looked at the perception and participation within the Eclipse community. The most common way to participate is by opening a bug (24.6%) or answering a newsgroup post (15%). Unfortunately, a large population (67%) does not actively participate in the community.

The Eclipse community has evolved over the last 5 years, from a Java IDE to a more diverse open source community. The perception of Eclipse in the wider developer community is also changing. However, the most common perception is that Eclipse is a developer tools integration platform (27.9%) and an IDE for different languages (24.9%).
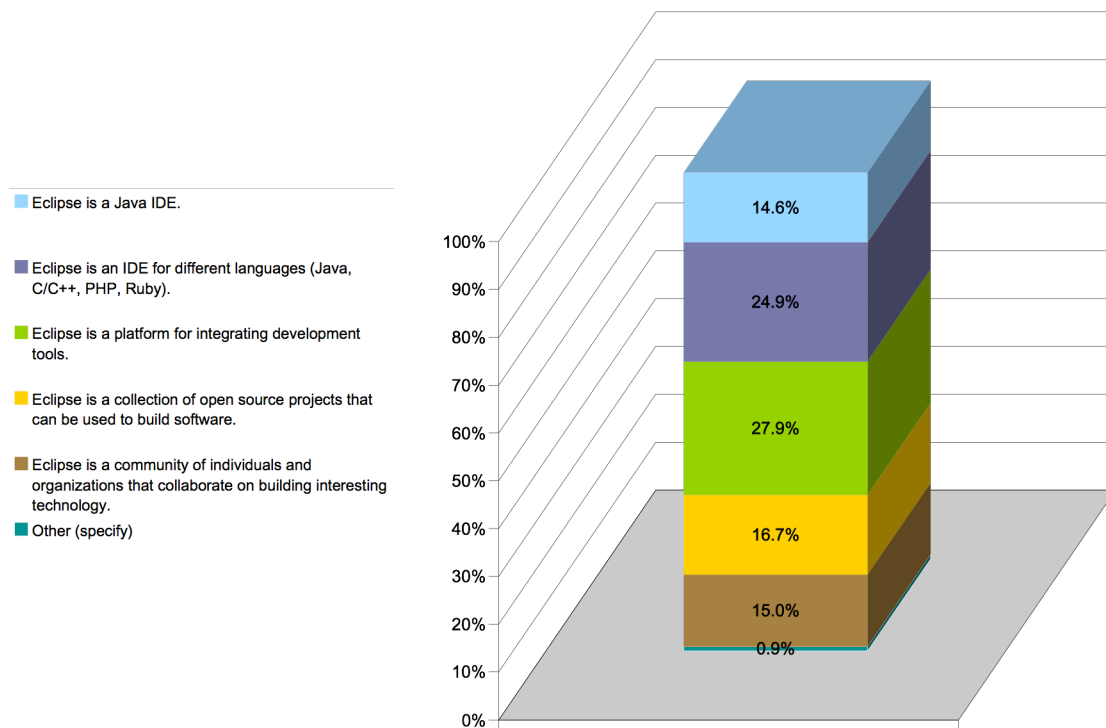
Eclipse is a Java IDE.

Eclipse is an IDE for different languages (Java, C/C++, PHP, Ruby).

Eclipse is a platform for integrating development tools.

Eclipse is a collection of open source projects that can be used to build software.

Eclipse is a community of individuals and organizations that collaborate on building interesting technology.

Other (specify)

Chart 17: Which statement best reflects your perception of Eclipse? (Choose one.)

Overall, the Eclipse community is generally satisfied with Eclipse; 89.1% reported satisfied or very satisfied with Eclipse. Congratulations to everyone!
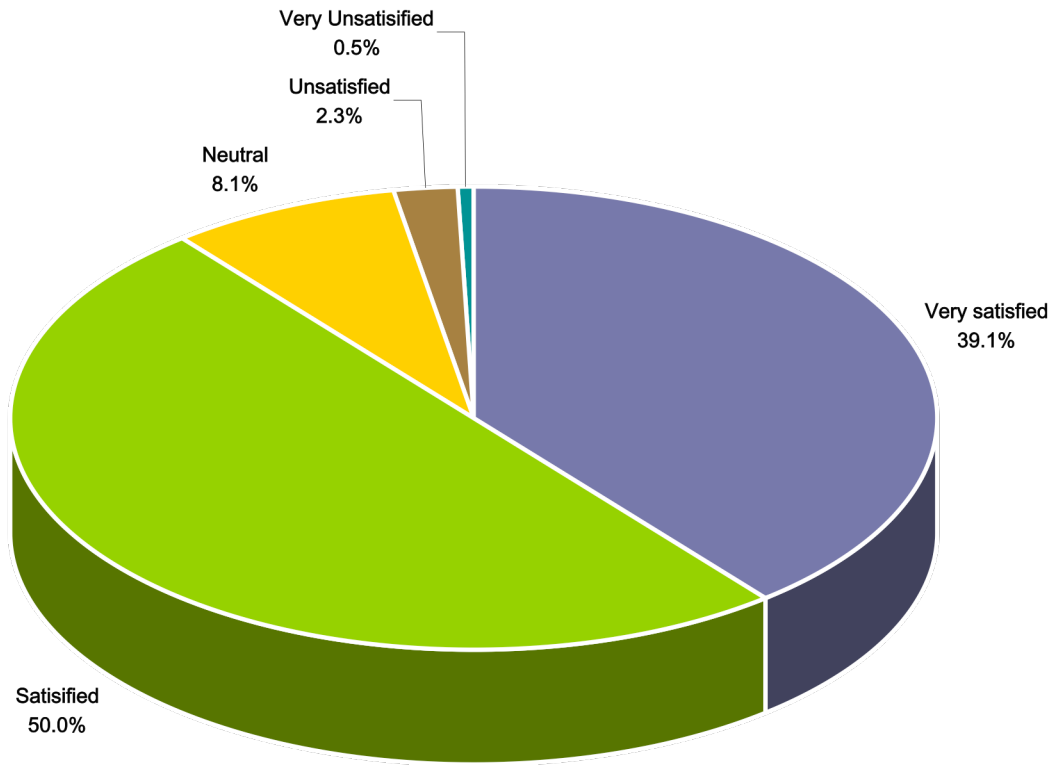
Chart 17: Overall, how satisfied are you with Eclipse? (Choose one.)