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## European Software Configuration Management Tool Adoption Trends

This is the first document in the “ALM Tool Adoption Trends” series.

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### EXECUTIVE SUMMARY

Over the past three years, Forrester’s annual Enterprise And SMB Software Survey has shown increasing awareness and adoption of application life-cycle management (ALM) processes and tools. ALM 2.0 — the next generation of tool support for ALM — is a work in progress, but that’s not stopping development shops from adopting new software configuration management (SCM), change management (CM), and release management tools. When it comes to SCM and software change and configuration management (SCCM), European application development leaders frequently adopt tools from IBM and Microsoft as well as the open source SCM tool Subversion. These application development professionals choose SCM tools partly based on their application platforms, but the desire to increase usage of open source ALM tools spans both .NET and Java shops. Traditional SCCM tools are most likely to be chosen when a development shop has a homogeneous SCCM strategy, but heterogeneity is more common.

### FORRESTER’S EUROPEAN ALM SURVEY SHOWS SCM TOOL HETEROGENEITY IS COMMON

Over the past three years, Forrester’s annual Enterprise And SMB Software Survey has shown increasing awareness and adoption of application life-cycle management (ALM) processes and tools. In fact, ALM adoption has increased an average of 30% per year for the past two years.<sup>1</sup> Development leaders are actively seeking to improve enforcement of process standards, management of traceability relationships, and collection of meaningful metrics across the full development life cycle.<sup>2</sup> But while vendors are still evolving their ALM 2.0 solutions, today’s development shops aren’t waiting for the perfect ALM 2.0 solution. Forrester recently surveyed approximately 300 European application development professionals to gauge their current attitudes toward ALM and how these attitudes affect their adoption of life-cycle management tools. While there is more to implementing an effective ALM solution than installing point tools, adoption patterns for individual life-cycle tools foreshadows how the broader ALM 2.0 market will evolve.

### European Developers Manage Code With A Broad Combination Of SCM And SCCM Tools

When it comes to managing changes to source code, we found a rich and varied landscape that is in transition as next-generation offerings compete with established players for developers’ hearts and minds. European developers use a broad range of standalone SCM tools and more-capable SCCM tools: We found more than 14 SCM/SCCM tools in active use by survey respondents. While this represents a broad pattern of tool adoption, there were some clear standouts regarding frequency of tool usage:

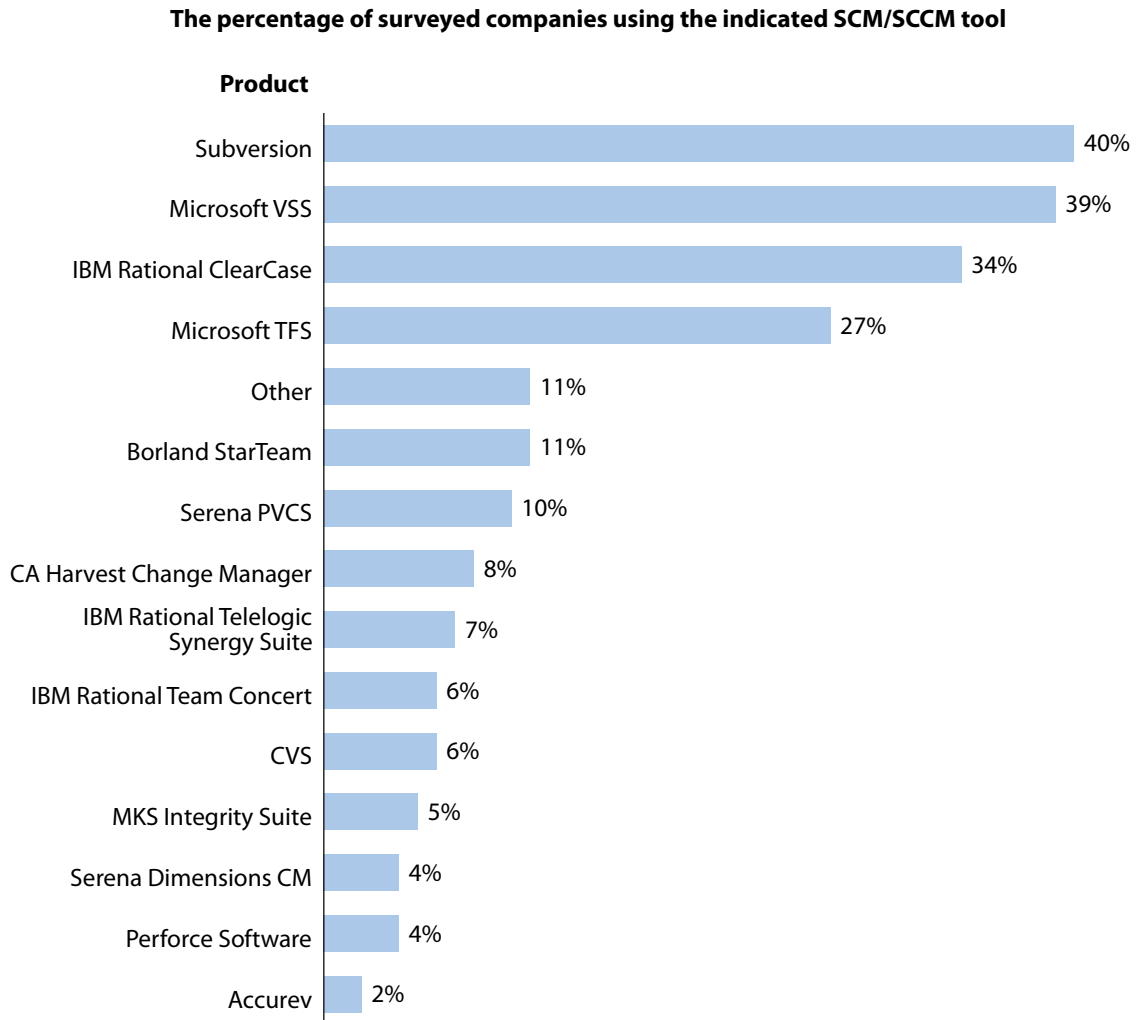


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- **Standalone SCM solutions are well represented.** Standalone SCM solutions provide basic source code management capabilities like check-in/checkout and simple branch-and-merge capabilities. While these tools require manual effort to track multiple source code changes made to fix a single defect, they are also simpler to implement. When small development teams choose ALM tools with only their individual requirements in mind, they tend to select low-cost, lightweight solutions with minimal setup or management overhead. This was common among survey respondents — two-thirds have at least one standalone SCM solution in active use. In particular, the continued popularity of Microsoft Visual SourceSafe (Microsoft VSS) and the emerging popularity of Subversion show that development leaders should consider how they will integrate or replace standalone SCM solutions as they move forward with ALM implementations (see Figure 1).
- **Microsoft has extended its market presence into SCCM.** Microsoft Team Foundation Server (Microsoft TFS) is also popular among development teams, with 27% of all respondents indicating active use. Unlike Microsoft VSS, Microsoft TFS has integrated change management, process enforcement, and metrics-gathering capabilities that make it one of the most capable SCCM tools available.<sup>3</sup> Overall, 49% of application development professionals surveyed use Microsoft TFS, VSS, or both. And while Microsoft TFS captured only an 11% share of Java-only shops, it does as well as any other SCCM tool in mixed Java and .NET shops (see Figure 2).
- **IBM shows strong SCCM leadership with Rational ClearCase.** IBM arguably has the broadest portfolio of SCCM tools, and it shows: 37% of application development professionals surveyed are using one or more IBM SCCM tools. But IBM Rational ClearCase is head and shoulders the most commonly deployed IBM SCCM tool at 34%. While IBM Rational ClearCase is broadly deployed across many industrial segments, IBM Rational Telelogic Synergy Suite shows up in just four industry segments. One of every five .NET-only development shops use IBM Rational ClearCase — double the rate of Microsoft TFS adoption in Java-only shops. And while IBM Rational Team Concert is just six months from its initial release date, it does register with 6% of development shops. Early adopters of IBM Team Concert mostly have heterogeneous SCCM environments, with only two shops indicating that Team Concert is their sole SCCM tool.
- **Open source has become an attractive alternative to commercial SCM tools.** Over half of the application development professionals surveyed indicated that they plan to use open source software (OSS) alternatives wherever possible as part of their ALM strategies (see Figure 3). This tendency to favor open source solutions is higher for Java-only developers at 67%, but even 43% of .NET-only development shops are interested in open source ALM tools. These high interest levels easily explain the high rates of Subversion adoption, but it's important to note that Subversion isn't the only OSS SCM option. An additional 6% of application development professionals surveyed reported using CVS, and while other emerging OSS options like Mercurial and Git didn't register, Forrester has seen anecdotal evidence that they are also garnering increasing developer interest.<sup>4</sup>

**Figure 1** European SCM/SCCM Tool Usage



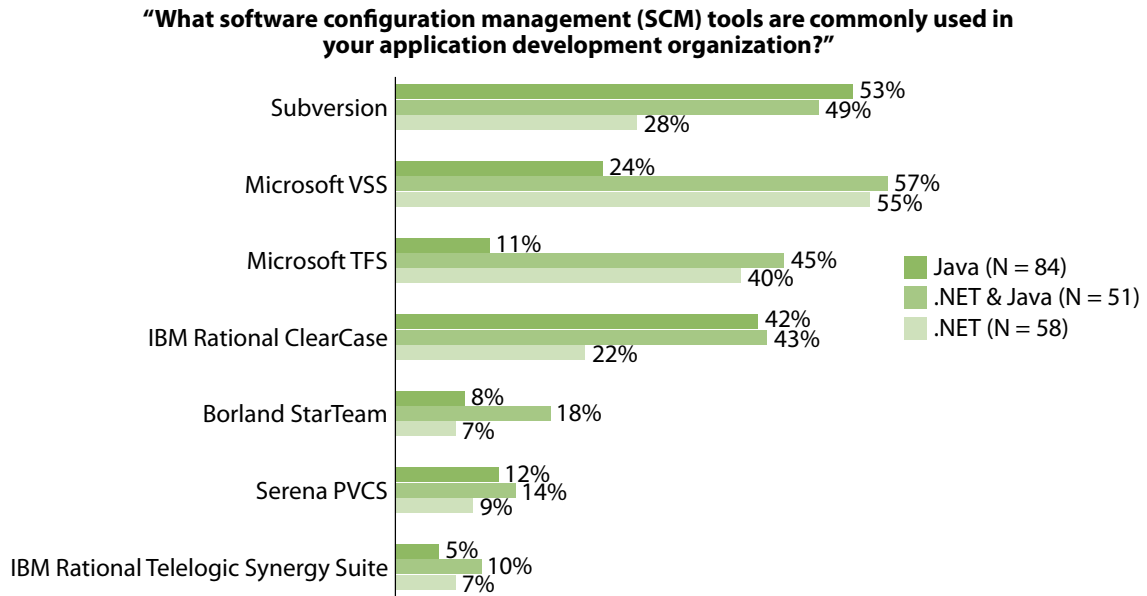
Base: 230 European application development professionals

Source: Q4 2008 European Application Life-Cycle Management Usage And Trends Online Survey

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Source: Forrester Research, Inc.

**Figure 2** SCM/SCCM Usage Varies By Type Of Development



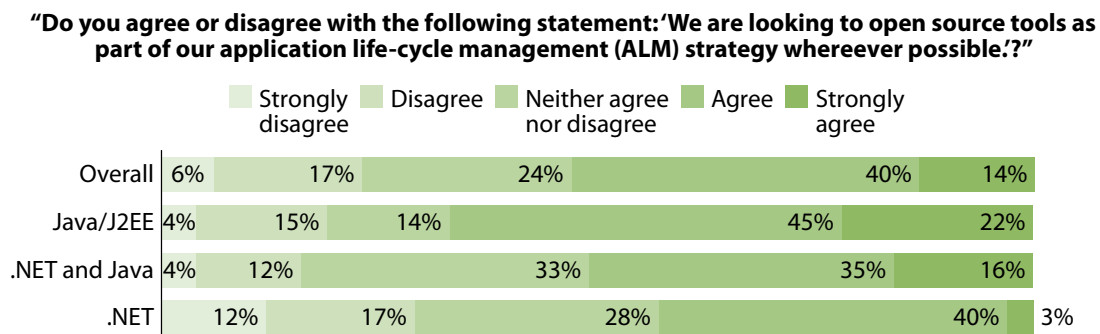
Base: 193 European application development professionals

Source: Q4 2008 European Application Life-Cycle Management Usage And Trends Online Survey

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Source: Forrester Research, Inc.

**Figure 3** Java Shops Prefer Open Source Software ALM Tools, But So Do .NET Shops



Base: 230 European application development professionals

Source: Q4 2008 European Application Life-Cycle Management Usage And Trends Online Survey

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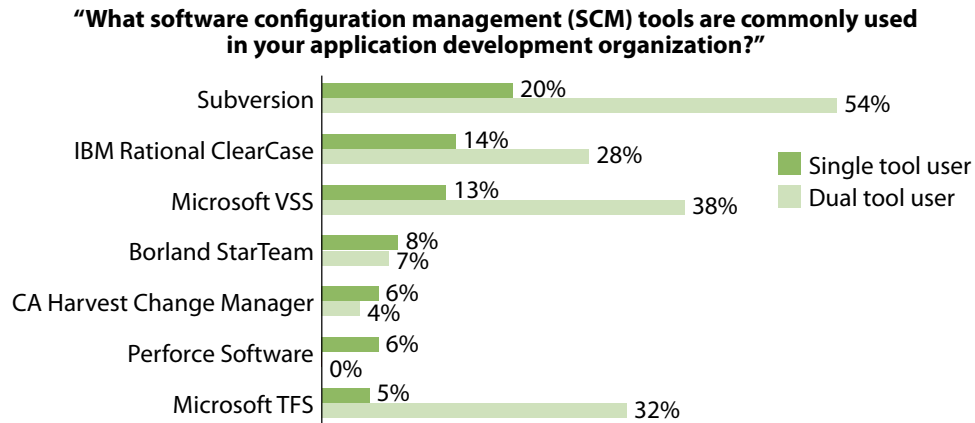
Source: Forrester Research, Inc.

### Traditional Tools Are Most Common Where Homogeneous SCCM Reigns

While there is a substantial drop-off in overall reported adoption rates when looking at SCM/SCCM tools from vendors other than IBM and Microsoft, this does not necessarily reflect a difference in value. It does, however, indicate a pronounced difference in how European development shops use tools from AccuRev, Borland, CA, MKS, Perforce Software, and Serena Software. Specifically:

- **Traditional SCCM solutions are more common in shops that standardize on a single tool.** When development shops use only a single SCM or SCCM tool, the gap between IBM, Microsoft, Subversion, and other tool providers is considerably smaller (see Figure 4). While Subversion still scored highest at the 20% of shops using a single tool, Borland StarTeam, CA Harvest Change Manager, and Perforce have usage rates in this group that are higher than the usage rate for Microsoft TFS. IBM Rational ClearCase and Microsoft VSS have the highest adoption rates among commercial tools, indicating that change management styles at heterogeneous shops range from lightweight to full-featured.
- **IBM, Microsoft, and Subversion have the highest adoption in shops that use multiple tools.** When shops add a second source code management option, adoption of Microsoft TFS spikes six-fold, rising from 5% to 32%. Subversion and Microsoft VSS also show higher adoption rates among heterogeneous users of SCCM; moving from homogeneous to heterogeneous users of SCCM, Subversion's and Microsoft VSS's rates rise from 20% to 54% and 13% to 38%, respectively. IBM Rational ClearCase is used twice as often in heterogeneous SCCM situations: 28% of heterogeneous shops use it, compared with 14% of homogeneous shops. Overall, heterogeneous SCCM is more common among survey respondents, with 59% using two or more SCM/SCCM tools. On average, survey participants used just over two tools, and the maximum number of tools in use was six (see Figure 5).
- **Dual-use combinations suggest two heterogeneous SCCM scenarios.** When we examined the combinations of SCM and SCCM tools that are in active use, two distinct usage scenarios emerged. One in every six shops uses a lightweight combination of Microsoft VSS and Subversion (see Figure 6). The second scenario features a standalone SCM solution paired with a fuller-featured SCCM solution. Common combinations of this second scenario include Microsoft VSS with TFS at 15% and Microsoft VSS with IBM Rational ClearCase at 14%. Survey respondents were also likely to pair IBM Rational ClearCase and Subversion (14% used this combination) but less likely to pair Microsoft TFS with Subversion (10% used this combination). The least likely combination was IBM Rational ClearCase and Microsoft TFS — only one in every 10 shops utilized this pairing.

**Figure 4** SCM Heterogeneity Boosts Traditional SCM/SCCM Players



Base: 86 European application development professionals using a single SCM tool and 69 European application development professionals using two SCM tools

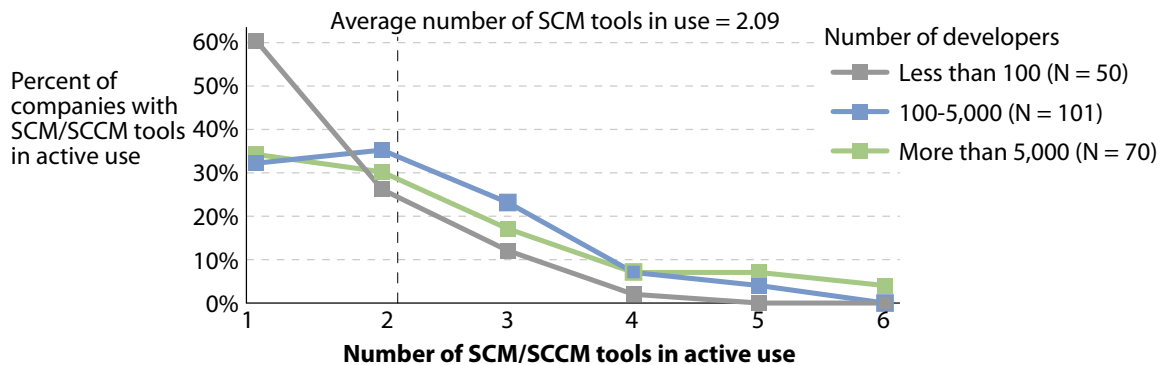
Source: Q4 2008 European Application Life-Cycle Management Usage And Trends Online Survey

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Source: Forrester Research, Inc.

**Figure 5** A Majority Of European Development Shops Use Multiple SCM/SCCM Tools

**“What is your best estimate of the total number of developers in your company worldwide, and how many software configuration management (SCM) and/or software change and configuration management (SCCM) tools do you have in active use?”**



Base: 221 European application development professionals

Source: Q4 2008 European Application Life-Cycle Management Usage And Trends Online Survey

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Source: Forrester Research, Inc.

**Figure 6** Common SCM/SCCM Tool Combinations

	IBM ClearCase	Microsoft TFS	Microsoft VSS
Subversion	14%	10%	16%
IBM ClearCase		10%	14%
Microsoft TFS			15%

Source: Q4 2008 European Application Life-Cycle Management Usage And Trends Online Survey

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Source: Forrester Research, Inc.

#### WHAT IT MEANS

##### MICROSOFT AND SUBVERSION ARE GAINING INCREASED ADOPTION

Microsoft Team Foundation Server is a relatively recent entry into the SCCM space, but since its introduction in October 2005, it's come a long way. Likewise, Subversion is a relatively new code base, and since its 1.0 release in 2004, it has gained significant traction, as these adoption rates demonstrate. As Microsoft TFS and Subversion take market share, they are altering the SCM and SCCM integration options available to application development professionals. What does this mean for your ALM strategy?

- **Microsoft TFS offers the most tempting value for .NET-only shops.** Development organizations that standardize on .NET and Microsoft Visual Studio will find the price-to-value ratio of Microsoft Team Foundation Server increasingly hard to resist. And as more shops put TFS through its paces, development professionals should expect rapid maturation of its capabilities as Microsoft preps VS 2010 for release.
- **Subversion will define minimum expectations for Java-focused SCCM tools.** Development organizations that standardize on Java will continue to select a variety of SCM and SCCM tools, but Subversion and its open source brethren will set expectations that commercial tools will have to significantly exceed in order to win business. Increasing price pressure among commercial SCCM vendors will inevitably result in a hypercompetitive environment, especially as SCCM vendors — including IBM — battle to convert existing IBM Rational ClearCase shops to newer solutions.
- **Traditional SCCM vendors will promote homogeneous SCCM for mixed-platform shops.** Look for traditional SCCM vendors to exploit development shops' perception that Microsoft favors Visual Studio integration and IBM favors the Eclipse IDE. If this turns out to be reality,

then it's conceivable that in the end one or more current SCCM vendors will take share by positioning their solutions as better alternatives for shops that want to build an ALM solution around a single SCCM component that works with all their development platforms.

## SUPPLEMENTAL MATERIAL

### Methodology

Forrester's Q4 2008 European Application Life-Cycle Management Usage And Trends Online Survey was fielded to 299 application development professionals. Respondents were asked to comment on multiple ALM topics to guide ongoing ALM research. For quality assurance, panelists are required to provide contact information and answer basic questions about their firms' size and development activities.

Forrester fielded the survey in the first three weeks of November 2008.

Exact sample sizes are provided in this report on a question-by-question basis. Surveys are not guaranteed to be representative of the entire application development population. Unless otherwise noted, statistical data is intended to be used for descriptive and not inferential purposes.

## ENDNOTES

- <sup>1</sup> For specific ALM adoption data from previous Enterprise And SMB Software Surveys, see the March 6, 2008, "[Enterprise Application Life-Cycle Management \(ALM\) Adoption In 2007](#)" report.
- <sup>2</sup> These three capabilities are the key pillars that underlie Forrester's definition of ALM 2.0. See the August 18, 2006, "[The Changing Face Of Application Life-Cycle Management](#)" report.
- <sup>3</sup> The term ALM 2.0, which Forrester coined in 2006, refers to the next generation of tool support for application life-cycle management (ALM). In the past two years, vendors have made progress in moving from ALM 1.0 to ALM 2.0, but no vendor has yet developed a solution that meets Forrester's five criteria for an ALM 2.0 solution. For more information, see the June 19, 2008, "[ALM 2.0: Getting Closer, But Not There Yet](#)" report.
- <sup>4</sup> In the course of speaking with a number of Ruby development shops and systems integrators, Forrester has observed that over the past year, many have replaced Subversion with Git (<http://git.or.cz/>). Git was originally written by Linus Torvalds to handle code management of Linux. Mercurial is a lightweight SCM system written in Python that is increasingly used by Sun Microsystems among others and is one SCM option behind "Project Kenai," its hosted software forge.