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## White Paper

Application Delivery Management

# Succeeding in the Journey to Agile and DevOps

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Quality delivery with Micro Focus® Application Lifecycle  
Management (ALM) solution.

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There are many challenges on your way toward Agile and DevOps. One of the most significant is coordinating the work of several development teams with multiple management methodologies.

## The Journey to Agile and DevOps

Agile and DevOps are clearly here to stay. The majority of today's enterprises are gradually adopting Agile practices for application development, and many are transitioning to DevOps. But while these two approaches rapidly gain momentum, many organizations continue to support traditional Waterfall processes and tools. The reality is that most rely on a mix of different methodologies, technologies, and processes. Regardless of the development approach and processes in use, development teams have one important goal in common: achieving faster time-to-market without compromising quality.

## Dealing with Challenges in the Journey

Without question, there are many challenges on your way toward Agile and DevOps. One of the most significant is coordinating the work of several development teams with multiple management methodologies. Some Agile project management tools may work well for individual teams but will not facilitate cross-team visibility and collaboration.

In addition, adopting Agile practices at enterprise scale is not easy. It is a journey with no defined path—requiring incremental steps—and you'll need to discover the precise path that fits your needs. During the process, you will typically rely on a mix of Waterfall and Agile processes and tools. This means you need a flexible lifecycle management solution that adapts to your needs as your teams grow in maturity and scale. Otherwise, you may suffer high maintenance costs and low productivity due to the use of several disparate and disconnected tools.

As you move forward in adopting Agile, your processes will likely expand to accommodate quality assurance (QA). In doing so, you may face challenges when a lack of automated tests results in more work and late discovery of issues. When you are ready to further extend Agile practices to your operations team, traditional processes might be jeopardized due to the increased speed of deployment. How does your team meet uptime and availability SLAs with so many frequent releases into production? The bottom line is that once something needs to be fixed, if you don't have traceability across the DevOps landscape you can't resolve issues with the required speed.

Micro Focus helps you solve these challenges with our Application Lifecycle Management (ALM) solution, which includes ALM/Quality Center and ALM Octane. For many years, Micro Focus ALM/Quality Center has served a large and growing customer base, including all of the top 25 Fortune 500 companies. Micro Focus ALM Octane extends the proven capabilities of ALM/Quality Center and is built specifically with Agile and DevOps in mind. This white paper explains how you can rely on the Micro Focus ALM solution to advance to Agile and DevOps.

## Succeeding in the Journey—Typical Scenarios

Transitioning to Agile and DevOps is a journey that can't be accomplished overnight. Micro Focus ALM solution provides the support you need at each step along the way.

Following are five typical scenarios that illustrate the journey from traditional Waterfall development to Agile and DevOps. Through these examples, you can see the specific advantages that Micro Focus ALM/Quality Center and ALM Octane offer to your development and testing teams.

The scenarios include:

1. Using traditional Waterfall
2. Starting small with Agile
3. Using a hybrid approach
4. Scaling Agile
5. Moving from test automation to DevOps

### 1. Using Traditional Waterfall

Although "pure Waterfall" development environments are less and less common, many organizations still have a mix of Waterfall and Agile projects. In highly regulated industries and large non-software projects, Waterfall still has its place.

Traditional Waterfall methodology is project-based: You define a set of requirements at the beginning of the project, specifying what the business wants to achieve through this project and a timeframe for delivery. The challenge in Waterfall is that later changes to requirements greatly impact the project in terms of time, money, and quality. This means change management is critical. Project teams need to anticipate risks and create a plan to manage them.

ALM/Quality Center has rich features to support these efforts, such as baselining, version control of requirements, change-impact reporting, and risk-based quality management. ALM/Quality Center also provides many best practices templates for managing and tracking Waterfall development, designed to help you increase the success rate of your projects. Traceability to test results and defects keeps project managers and QA managers aware of the realtime status of project quality, so that they can make the right decisions.

### 2. Starting Small with Agile

The most successful introduction of Agile usually starts small. If you are currently using ALM/Quality Center to develop applications with Waterfall, often the best approach is to introduce Agile by enabling a few teams to start using ALM Octane\*.

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Starting small with Agile by adopting ALM Octane lets you keep track of all your development teams together, including the new Agile teams.

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\* ALM/Quality Center customers are entitled to use ALM Octane with their existing licenses.

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The close integration between ALM/QC and ALM Octane allows you to be flexible in the pace and path of Agile adoption.

If you have been using ALM/Quality Center for visibility and traceability across your development teams, over time your teams have probably customized their tracking and reporting for their specific needs. You will want to preserve the value of this customization while keeping track of all your development teams together, including the new Agile teams.

Micro Focus provides seamless synchronization between ALM/Quality Center and ALM Octane, so that you can continue to monitor and manage a total view of all projects using ALM/Quality Center.

Some organizations use a Project and Portfolio Management (PPM) tool to manage Waterfall and Agile projects together. If you are already using Micro Focus PPM, you can easily upgrade to gain the ability to centrally manage hybrid projects.

### **3. Using a Hybrid Approach**

Once you have proven the value of Agile through successful implementation for a small number of teams, you may decide to extend the practice to more projects. But some types of projects are more difficult to transition to full Agile immediately. That's why there are several hybrid approaches.

You may decide to use a mixture of methodologies in a single project or employ a combination of management tools.

Following are two typical hybrid use cases. After reviewing these, you can evaluate your own specific situation and decide whether to manage your hybrid projects using ALM Octane alone or ALM/Quality Center and ALM Octane together.

#### **HYBRID DEVELOPMENT USING ALM/QUALITY CENTER AND ALM OCTANE**

If you are currently using ALM/Quality Center, you can easily do hybrid development with ALM Octane added. The close integration between the two tools allows you to be flexible in the pace and path of Agile adoption. You can create a project in both ALM/Quality Center and ALM Octane and synchronize data between them, and can gain a consolidated project view from either tool. In this scenario, you can continue to take full advantage of the ALM/Quality Center features your business relies on while increasing the span of Agile adoption step by step.

Using ALM Octane for Agile management provides user-friendly backlog management and sprint management functions, as well as a rich set of Agile reporting widgets such as Sprint burndown, Sprint velocity, Epic burnup, and Velocity planned vs. Actual. The Team Backlog module gives each team its own space, and the Quality module provides QA teams with a view of the quality of each application component, so that issues of one component can be addressed without dependency on others.

Test automation and continuous integration become mandatory at this stage. Without these features, you can't get feedback early and truly enjoy the benefits of Agile. ALM Octane is your choice for this purpose. You don't need another tool—instead, take advantage of the ALM Octane test and quality management capabilities.

### CONSOLIDATING HYBRID DEVELOPMENT MANAGEMENT INTO ALM OCTANE

If you are using multiple tools to manage your traditional and Agile projects separately, the effort and cost to maintain the system can be greatly reduced by moving to a single tool—ALM Octane. In addition, the ALM Octane client is pure HTML5 web-based, so that when there is an upgrade, you don't need to do anything at the client side. This also gives you more flexibility in the devices and browsers you choose to use.

You may have already introduced tools like JIRA to your Agile teams, and if so, you may be struggling with lack of traceability and cross-project visibility. ALM Octane provides a working synchronizer with JIRA, as well as cross-project reporting capabilities. Migrating to ALM Octane reduces your need for additional, specialized tools—thus decreasing your TCO.

As a result, you not only reduce cost but also gain the traceability you didn't have before. Requirements, code, builds, tests, deployments, and defects are all inter-linked—enabling a true lifecycle view of your projects. In addition, you have access to an overview that shows what is going on in the delivery pipeline. You will see where a code change is—whether it is failing at build, has become a release candidate, or is somewhere in between. This is very crucial in assuring quality when the pace of development becomes faster and faster.

By consolidating multiple tools into ALM Octane, you not only reduce cost but also gain the traceability you didn't have before.

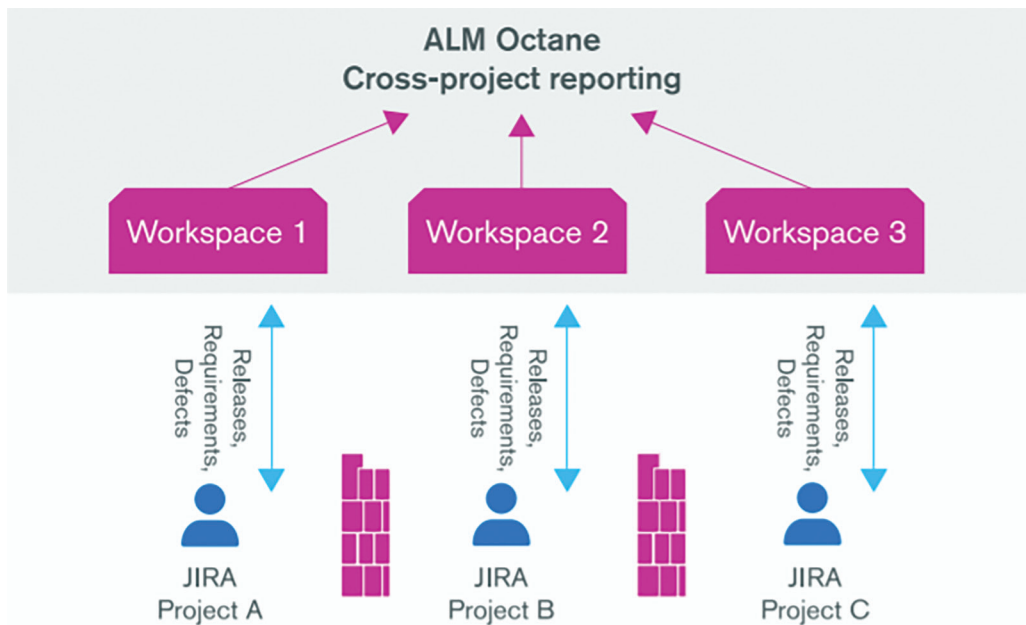


Figure 1. ALM Octane brings perspective across JIRA teams

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ALM Octane provides the mechanism for you to implement those leading enterprise agile frameworks

#### **4. Scaling Agile**

When hybrid Agile practices succeed and you achieve a sustainable speed of delivery, you may want to scale projects and teams to a larger scope. To address the challenges of scaling, several enterprise Agile scaling frameworks have emerged, such as SAFe (Scale Agile Framework), LeSS (Large-scale Scrum), Nexus, DAD (Disciplined Agile Delivery), and Spotify. ALM Octane serves you well when you adopt any of these frameworks.

ALM Octane is built with SAFe support in mind. Its entity structure follows the SAFe concepts of Epic, Feature, and Story, and it has all the features to implement SAFe up to program level. By integrating with Micro Focus PPM, all configurations of SAFe can be implemented.

ALM Octane also provides the mechanism for you to implement DAD. DAD emphasizes a goal-driven approach as opposed to prescriptive methodologies. ALM Octane is highly flexible, enabling you to customize it to support any methodology suitable for your specific situation.

Common to all scaling frameworks is the need to support a large organization with multiple products and multiple teams. ALM Octane is designed for such scenarios. The cross-workspace customization and reporting it provides are very important in implementing any scaling frameworks.

In addition, most large enterprise Agile frameworks recognize the importance of governance and enterprise awareness. ALM Octane provides workflow, template, DevOps governance, and strong security features for organizations adopting these frameworks.

#### **5. Moving from Test Automation to DevOps**

Some Agile management products support only planning and tracking and require another tool for test and quality management. ALM Octane provides planning, tracking, test, and QA features in a single tool. Wherever you are in Agile transformation, ALM Octane provides valuable capabilities including test automation, reporting, quality management, failure analysis, and the ability to eventually transition to DevOp.

#### **MODERNIZING TEST AND QUALITY MANAGEMENT**

Even before Agile became popular, test automation was the goal of many software development teams. That's why Micro Focus Unified Functional Testing (UFT) was created and has been very well received by our customers. ALM/Quality Center has a set of features to manage and execute UFT tests effectively and track test results.

However, the automation achieved was within specific scope, not end-to-end. In recent years, the advent of some open-source and non open-source tools finally made end-to-end automated test the reality. Today it's no surprise that even Waterfall projects use Jenkins for build and test execution.

When you want to extend Agile to QA, a tough obstacle to tackle is to automate all tests, including unit tests, integration tests, user acceptance tests, performance tests, and so on. Provisioning of the test environment needs to be automated as well. In response to this challenge, ALM Octane puts a tool chain in your hands. Tools for all sorts of test and verification can be added to the chain to build complete automation. Integrating Micro Focus Service Virtualization into the tool chain brings significant savings in testing time by removing test restrictions caused by delays in availability of external services and software components. You can also execute UFT tests in the tool chain.

ALM Octane presents a new way of creating automated tests, with its built-in BDD framework backed by the Gherkin test mechanism. It allows you to turn manual tests into auto-tests very easily, using Cucumber or SpecFlow. This is one of the most attractive features embraced by customers who have adopted ALM Octane.

## **DEVOPS**

After Agile is fully part of your development processes and QA is successful, you can begin to think about extending it to operations. This can be a much bigger challenge than the previous steps. To meet availability and other SLAs, Operations teams don't like frequent changes in the production environment. They are right: frequent releases, without a high confidence in quality, can put your business in danger.

DevOps is meant to solve the dilemma. It enables you to build a vehicle to automate and accelerate the development and operations processes. Starting with continuous integration, ALM Octane lets you extend the range of full automation to the entire application lifecycle.

ALM Octane integrates with leading continuous integration server products such as Jenkins, TeamCity, and Bamboo. You can integrate a wide range of source-control management tools, testing tools, and others. More importantly, the traceability from requirements/defects to the relevant code changes, builds, and tests is established in ALM Octane. Based on this traceability, ALM Octane can identify hotspots and risky commits in your code, to let you proactively take caution. Traceability can drastically speed up the resolution of production issues.

ALM Octane manages the large number of pipelines needed by enterprise-level development. It visualizes the topology of each pipeline, as well as the build status and trends. In addition, build failures can be broken down to application-component level. The failure analysis feature has the intelligence to categorize failure reasons, identify test failure patterns, and find the developers potentially related to the failure. ALM Octane also integrates with release automation tools such as Xebia XL, to let you enforce the criteria to meet before the final release decision. With everything automated in the pipeline, it will seem as if your applications are created in an assembly line with predictable high quality. Even if they are released frequently, your CxO, VP of Apps, QA director, and all stakeholders can feel confident.

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## Key Takeaways

- Start your Agile and DevOps transformation with ALM Octane to avoid disconnection between Agile teams or Agile vs. Waterfall silos from the very beginning.
- Reduce TCO by consolidating separate tools into ALM Octane.
- Take advantage of ALM Octane to modernize your test and quality management, achieve end-to-end automation, and extend Agile practices to QA and Operations
- ALM Octane adapts to your needs as your organization grows in Agile/DevOps maturity and scale, and achieves higher return on investment.

## About Micro Focus ALM/Quality Center

ALM/Quality Center is an industry-leading application lifecycle management platform that supports requirements management, project planning and tracking, test and quality management, defect management, release management, and application lifecycle intelligence. It provides best practice templates for a traditional project-based delivery structure. Highly customizable and scalable, it can meet many different enterprise business needs.

ALM/Quality Center provides strong support to projects that have regulatory compliance needs, including version control of requirements and test cases, the SOX (Sarbanes Oxley) IT Assessment Accelerator, and E-signature.

ALM/Quality Center also addresses the need for a stronger connection between business process modeling, quality management, and requirements definition. In addition, it manages tests created with the business process testing framework, allowing you to reuse the test components based on business processes to increase test flow ROI.

Micro Focus continues to enhance ALM/Quality Center to support your changing business needs. (One recent example is the addition of the Quality of Things feature for managing IoT testing.)

## About Micro Focus ALM Octane

ALM Octane—the application lifecycle management tool built precisely for enterprise-level Agile and DevOps—offers a full set of Agile management features but is methodology-agnostic, supporting any methodology or a mix. Its innovative DevOps features enable your development teams to embrace leading open-source and non open-source technologies, which can significantly accelerate their work. The

test and quality management features built into ALM Octane bring better end-to-end traceability—with insights into source code, build, and the entire DevOps pipeline. ALM Octane provides a single view of the truth across the entire development and test environment. The Behavior Driven Development (BDD) framework is highly valued by our customers because it enables them to turn manual tests into auto-tests very easily. Like ALM/Quality Center, ALM Octane is highly customizable and scalable.

Because the ALM Octane client is pure web-based, it allows access from a wide range of devices and HTML5 browsers. It brings more flexibility and saves you the effort of maintaining and upgrading the client-side component.

## Why Micro Focus for ALM?

Micro Focus is a global software company with 40 years of experience in delivering and supporting enterprise software solutions that help customers innovate faster with lower risk. By applying proven expertise in software and security, we enable customers to utilize new technology solutions while maximizing the value of their investments in critical IT infrastructure and business applications. As a result, they can build, operate, and secure the IT systems that bring together current business logic and applications with emerging technologies—in essence, bridging the old and the new—to meet increasingly complex business demands.

With more than 6,000 large-enterprise customers worldwide, Micro Focus is a proven leader in lifecycle management solutions. Our mission is to support our customers' application development environments regardless of the methodologies and processes they are using.

## Get Started Now

Wherever you are in the journey toward Agile and DevOps, we have the right ALM solution to meet your current needs and evolve with you. If you are currently using ALM/Quality Center, it's easy to transition to ALM Octane. ALM/Quality Center continues to provide the quality management you have come to rely on for your Waterfall projects and can be used in conjunction with ALM Octane for your Agile and hybrid projects. And you can easily split your current Micro Focus licenses based on your project requirements.

Talk with your local Micro Focus sales representative to find out more.

### Learn More At

[www.microfocus.com/alm-octane](http://www.microfocus.com/alm-octane)

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Additional contact information and office locations:  
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