

A practical guide to choosing the right agile tools for your team

Plan for your agile success with solutions designed to evolve as you grow



Selecting agile tools to fit your team's journey

The benefits of agile development are well-known:

- Better teamwork with greater productivity
- Working software created more quickly and efficiently
- Consistent delivery
- Higher quality solutions
- Improved customer satisfaction

Yet each team's journey toward achieving these desired results will vary. Some people will adopt Scrum and other simple approaches using open source tools, others will automate and implement a disciplined agile approach, and still others will require more extensive agile lifecycle management solutions. Agile practices need to be adjusted to meet the goals, needs and unique environment of each team.

IBM Rational® software has helped thousands of companies worldwide improve their agility with software best practices, tools and services—including training and coaching—tailored to support their evolving agile practices. IBM understands that a single-size solution does not fit all.

This guide is designed to help you choose the agile tools that will help support your needs today while positioning your team for success as your agile implementation grows. One of the best ways to begin is by asking a few key questions.

Does our team have the necessary automation to conduct rapid agile iterations?

We've learned that teams first consider tools after they have completed a few agile pilot projects; have undergone self-evaluation; and understand that they need to improve core practices such as agile planning, collaboration and continuous integration.

Can we enable collaboration and transparency across all stages of the lifecycle?

Teams then consider tools as a way to reduce risk and address complexity as they continue to grow their skills and maturity across the agile lifecycle. Many expand their practice to accommodate test-driven development, continuous change and evolving requirements, and greater stakeholder involvement.

Do complexities exist that require making modifications to traditional agile practices?

The good news is that the right tools can help you succeed, regardless of your entry point. Your challenge is to identify your greatest need today, the improvements you need to make to current practices and whether new tools are really the solution. Your team also needs to establish criteria to evaluate its success and be able to gather and analyze timely, objective data to help drive continual process improvements.

Key criteria to consider

This guide helps you evaluate agile tooling using seven key criteria. A short description of each of the criteria is followed by a detailed checklist to further guide your selection process.

Core agile capabilities

First and foremost, agile tooling must support people over process by giving the agile team, product owners and other project stakeholders the integrated capabilities they need to collaborate and work as productively as possible. Individual tools addressing specific agile capabilities can be effective but can decrease team productivity because people must learn and access different tools. A comprehensive solution that provides core agile development management capabilities as well as dynamic planning linked to execution can offer much greater benefit—at much lower cost—than a solution pieced together.

Integrated and open agile delivery

Your agile tooling should allow you to protect your investments in existing tooling, minimize required maintenance of integrations and bypass brittle point-product integrations. A single

delivery platform built on open, industry standards can help make all of this possible. An open platform can simplify the job of integrating existing open source and commercial tools as well as help lower maintenance overhead and training costs. It offers you the ability to assemble your own ideal software delivery infrastructure based on preferred tools and vendors and, at the same time, optimizes your long-term flexibility.

Team collaboration in context

Your agile tooling should make collaboration easier across all stages of the lifecycle. All team members, including stakeholders, should have web-based access to real-time, role-relevant information as well as the ability to easily make contributions to projects. When agile team members can work together in the context of their work, the focus can more easily remain on the delivery of working software.

Lifecycle traceability

Your agile tooling should allow individual team members to quickly understand how their actions can affect the project as a whole as well as the tasks of other team members. With many tools, tracking work items across the agile delivery lifecycle can be a hit-and-miss endeavor if asset data is not linked using open, public specifications. The tools you use should provide integrated planning with built-in, customizable traceability reporting.

Agile development analytics

The ability for managers and agile team members to make informed decisions is key to reducing friction and accelerating the velocity of agile teams. Be sure to look for solutions that centralize work items in a single database so that your team has a single, reliable source of truth. Also look for tools that deliver new insights through customizable, drill-down dashboards and reports; cross-project trend analysis capabilities; and work histories of work items and artifacts.

Adaptability and flexibility

Regardless of the size or maturity of your agile team, your agile tooling should give you the ability to deploy, customize, enact and improve agile processes. When selecting your tools, don't

overlook whether they support formal, agile and hybrid approaches and whether they are packaged with an enterprise-ready web server and database. Also consider whether the vendor is offering to help speed your time to value and lower your costs with a free version and a trial cloud environment.

Agility at scale

Be sure the vendor and tools you are evaluating can support the more-advanced needs of disciplined agile delivery and delivery at scale. As your organization grows, it most likely will need a well-defined agile scaling process, team structure and tooling environment to address real-world complexities, such as those faced by teams distributed across organizations or geographies or teams addressing compliance requirements. Your team could need support in many other areas as well.

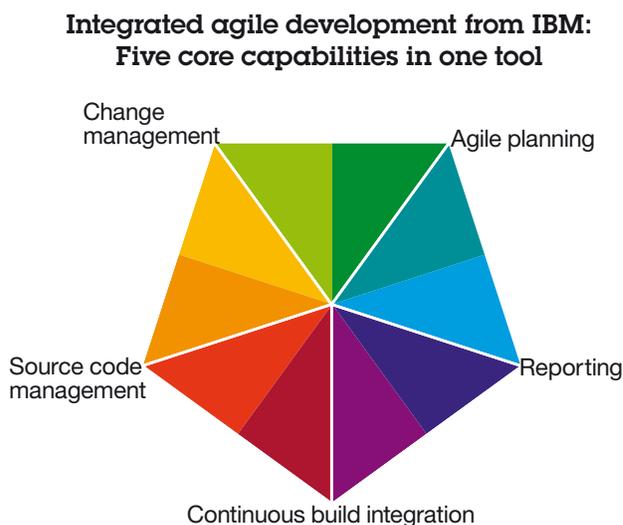


Figure 1: The IBM Rational Team Concert solution provides unified tooling tailored to support your evolving agile practices. Core agile capabilities, including an automated planning system, are combined with holistic dashboards on the client side plus an out-of-the-box database and web server.

Agile evaluation guide checklist

Core agile capabilities: First and foremost, the agile tool must support people over process by facilitating collaboration and productivity among the agile team, product owners and other stakeholders.

Features comprehensive agile planning and tracking (by product, release and iteration)	<input type="checkbox"/>
Provides dynamic plans linked to execution, with plans automatically updated to reflect current status as teams complete tasks	<input type="checkbox"/>
Includes out-of-the-box agile process templates that can be easily adapted	<input type="checkbox"/>
Allows product owners and stakeholders to collaborate in managing and prioritizing product backlogs	<input type="checkbox"/>
Provides customizable dashboards and reports (to track burn down, burn up and velocity and give you flexibility in reporting your metrics)	<input type="checkbox"/>
Offers flexible change management capabilities (to track defects, tasks, impediments, builds and retrospectives) with the ability to create custom tasks	<input type="checkbox"/>
Supports the ability to define, create and manage themes using epics and user stories	<input type="checkbox"/>

Integrated and open agile delivery: The agile tool must allow you to protect investments in existing tooling, minimize the amount of maintenance of integrations and bypass the need for brittle point-product integrations.

Natively integrates with the team's development environment (including Eclipse and Microsoft Visual Studio environments)	<input type="checkbox"/>
Includes source code management and continuous build integration capabilities	<input type="checkbox"/>
Allows multilevel builds supporting personal, feature, team and integration work	<input type="checkbox"/>
Provides open services to integrate with complementary agile tooling	<input type="checkbox"/>
Includes integrations with popular source code management (SCM) tools (including Apache Subversion, Git and IBM Rational ClearCase® software) and supports federated SCM environments	<input type="checkbox"/>
Supports multiplatform development (Java, C, C++, Visual Basic .NET [VB.NET] and COBOL)	<input type="checkbox"/>

Team collaboration in context: Collaboration is a keystone of successful agile adoption. The ability for team members, customers, managers and stakeholders to work together in context of the work reduces busywork and allows the agile team to focus on delivering working software.

Provides plans, to-do lists and work items built into the development environment	<input type="checkbox"/>
Allows conversations via instant messaging to be embedded into work items from the development environment	<input type="checkbox"/>
Allows all team members to subscribe to and comment on relevant work items	<input type="checkbox"/>
Provides visibility into tasks or code changes that may depend on or affect team members' work	<input type="checkbox"/>
Allows stakeholders to stay apprised of status updates and contribute to projects via web interfaces	<input type="checkbox"/>
Facilitates review of work items through discussion threads, voting tools, and approval-and-review capabilities	<input type="checkbox"/>

Lifecycle traceability: The ability to understand how your actions affect others, find gaps in test coverage and block defects helps your team more easily course correct, identify and mitigate potential risks, and reduce friction across the agile delivery lifecycle.

Traces all work item types (including epics, user stories, tasks, defects, impediments, retrospectives and builds)	<input type="checkbox"/>
Includes multiple traceability options (such as parent-child, depends-on, blocks, resolves, related and affects)	<input type="checkbox"/>
Provides customizable traceability plan view with the ability to automate flagging of risks and issues (for blocking defects and test coverage)	<input type="checkbox"/>
Allows all team members to create traceability reports and dashboard widgets	<input type="checkbox"/>

Agile evaluation guide checklist

Agile development analytics: The ability for managers and agile team members to make informed decisions is key to reducing friction and accelerating the velocity of agile teams.

Provides one source of record for agile teams in a centralized repository	<input type="checkbox"/>
Offers dashboards that can be customized for individuals, for teams or by role	<input type="checkbox"/>
Supports cross-project trend analysis	<input type="checkbox"/>
Provides drill-down capabilities on dashboards and reports	<input type="checkbox"/>
Tracks history of work items and artifacts for audit purposes	<input type="checkbox"/>

Adaptability and flexibility: Your tool should support your team regardless of its process or size. It is also important to select a vendor that provides a comprehensive deployment environment and offers a simple way to try the tooling.

Provides process tools with the ability to deploy, customize, enact and improve agile processes	<input type="checkbox"/>
Supports agile, formal and hybrid approaches	<input type="checkbox"/>
Offers the ability to automate dependent processes (builds, unit tests, code check-ins)	<input type="checkbox"/>
Includes an enterprise-ready web server and database	<input type="checkbox"/>
Provides a free version for up to 10 team members and a trial cloud environment	<input type="checkbox"/>

Agility at scale: As your organization grows and your needs evolve, be sure the vendor you are evaluating can support the more-advanced needs of disciplined agile delivery and delivery at scale.

Access and security: A security-rich platform supporting single sign-on; smart card authentication; and flexible, role-based permissions	<input type="checkbox"/>
High availability: Ability to deploy tooling on a high-availability platform	<input type="checkbox"/>
Defined scalable process: Provides a well-defined agile scaling process	<input type="checkbox"/>
Deployment: Bridges gaps with enterprise deployment planning and automation and help desk integrations	<input type="checkbox"/>
Quality and testing: Capabilities to empower independent test teams, including automated functional, security and performance testing	<input type="checkbox"/>
Development of complex applications: Allows teams to grow beyond basic development tooling	<input type="checkbox"/>
Systems development: Support for development of embedded systems	<input type="checkbox"/>
Agile modeling: Capabilities for sketching, prototyping and designing that integrate into the agile tooling framework	<input type="checkbox"/>
Code quality: Allows teams to add static and security code analysis into the continuous integration process	<input type="checkbox"/>
Business collaboration: Allows business stakeholders to work with their choice of collaboration tools	<input type="checkbox"/>

IBM Rational Team Concert software: Designed for agile success

IBM can help you implement an agile software delivery environment that can address your strategic requirements today—and tomorrow. Built on the open IBM Jazz™ platform, IBM Rational Team Concert™ software provides integrated tooling that includes customizable, out-of-the-box agile templates; planning capabilities linked to change management and source code management; and continuous integration with dashboards that deliver real-time status information to project stakeholders. Featuring native source code management and build automation, Rational Team Concert software integrates into popular integrated development environments and can be used with leading commercial and open source tools. It leverages open, public specifications developed through the Open Services for Lifecycle Collaboration initiative, working to enable seamless integration of open source, commercial and homegrown tools across development environments.

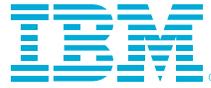
For more information

To learn more about which agile development approach is best for your organization, contact your IBM representative or IBM Business Partner, or visit: ibm.com/rational/agile

Click on the link below to view *The Jazz Revolution*, an interactive demo on IBM Rational lifecycle collaboration management: https://www14.software.ibm.com/webapp/iwm/web/signup.do?source=swg-rtl-sd-demo&S_PKG=dm_calm-jazz-revolution

Click on the link below to view an interactive demo on dispelling myths associated with scaling agile practices: https://www14.software.ibm.com/webapp/iwm/web/signup.do?source=swg-rtl-sd-demo&S_PKG=dm_agile-everyware

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