

Agile vs DevOps: What's the Difference?



By Kaya Ismail | Nov 19, 2018

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Agile and DevOps are two software development methodologies with similar aims; getting the end-product out as quickly and efficiently as possible. While many organizations are eager to employ these practices, there is often some confusion between the two. What does each methodology encompass? Where do they overlap? Can they work together, or should you choose one over the other?

As always, we've tapped into the knowledge of industry experts to define and differentiate the two practices, identify the advantages and disadvantages, and highlight the best use cases for each one.

What is DevOps?

DevOps is a software development methodology that aims to bring software development teams and information technology operatives together. It is a concept that fosters a culture of collaboration between these two teams that historically worked in their own separate silos, from the initial design phase right through to product release.

“DevOps is a methodology that combines software development (Dev) with operations (Ops). The intent is to enable communication between the teams so that they can build, test, and release software more quickly and with greater efficiency and speed,” said Tyler Duzan, Product Manager, Raleigh, NC.-based [Percona](#).

In combining these two distinct teams and processes together, it promoted continuous integration, continuous deployment, automated testing, and transparency in code repositories. Prasanna Singaraju, CTO and co-Founder of Dallas-based [Qentelli](#), explained that when “Dev” and “Ops” work together they “effectively deliver top quality products and services on a continual basis.”

Related Article: [Agile vs Scrum vs Kanban Weighing the Differences](#)

What is Agile?

The agile methodology is also a software development methodology that came circa 2001, when the [agile manifesto](#) was introduced. It employs four values and twelve principals that help build an “agile” software development culture. Generally speaking, agile encourages adoption and a leadership mindset that promotes teamwork, self-organization, and accountability. More importantly, the agile approach focuses more on continuously aligning development with customer needs and trends — even when those needs and trends change late in the development process.

CMSWire spoke with Mike Hendrickson, Vice President of Technology & Developer Products at Nashua NH.-based [Skillsoft](#), who he shared that agile embodies a set of principles that help individuals, teams and larger units to work together. But Hendrickson also added the “agile mindset” focuses more on the people, rather than the processes and tools. “An agile organization adapts and learns about constant change enabling them to identify new opportunities and add more value for customers. With constant disruption in most industries, being “agile” is key to success because all parts of the organization are working together to bring more value to their customers,” explained Hendrickson.

Read more about [agile project management](#), and discover the differences between [agile](#), [SCRUM](#), and [Kanban](#).

Agile vs DevOps: The Benefits, Similarities, and Differences

Fundamentally, DevOps brings together two large siloed teams together to allow for quicker software releases while Agile is focused on getting smaller teams to collaborate with each other so it can react quickly to the ever-changing consumer needs.

Davy Hua, Head of DevOps at Santa Clara CA.-based [Shiftleft](#), explained how both Agile and DevOps are managed. “Agile employs sprints, [which] range from a week to [months] as a way to manage development schedule while DevOps focuses on hyper-releases starting with several per day,” Hua said.

Both DevOps and Agile can work in tandem since they can complement each other. DevOps promotes a fully automated continuous integration and deployment pipeline to enable frequent releases, while Agile provides the ability to rapidly adapt to the changing requirements and better collaboration between different smaller teams.

Michael Mazyar, CTO at Cary NC.-based [Samanage](#), further elaborated on the “mutual benefits” of both DevOps and Agile. “When applied in tandem, Agile and DevOps can enable organizations to develop and implement technology with significantly greater speed. [Plus], there’s an emphasis on putting customer needs at the forefront of whatever technology it is you are developing, [along with an] understanding [of] how the software is being used, and [how it should be improved].”

That said, the potential drawbacks that face both DevOps and Agile are rooted in the “significant cultural shift” they both require. DevOps requires two siloed teams to nurture a relationship to work together, and Agile requires organizations to move away from a conventional static work environment.

Mayzar highlighted that these potential challenges are likely to be imminent in larger organizations. “Within an organization, particularly larger organizations, different teams are likely to have their habits of focusing solely on departmental goals ingrained in their way of thinking. It’s essential to have the appropriate resources and stakeholder buy-in for both approaches.”

On an individual basis, Singaraju explained that Agile has many advantages over the conventional waterfall model but does come with some certain challenges, especially for larger teams. “Agile has various advantages [including] user-focused development, increased team collaboration, fast product delivery, and flexibility. However, it does come with some challenges such as uncertainty of end goal, and making it work right for large teams.”

As for DevOps, Singaraju commented on how it can accelerate product innovation, but if not executed properly it can cause a burden. “DevOps [enables] better quality, performance, and accelerated product innovation. However if not done right, DevOps can become an additional burden on teams and lots of wasted investments on tools and infrastructure.”

Agile and DevOps Can Work Together

Agile and DevOps may be different, but that doesn't mean you should adopt one above the other. On the contrary, the Agile methodology and the DevOps methodology can work in tandem. Will Kinard, CTO of Bethesda, MD.-based [BoxBoat](#), mentioned that BoxBoat, "uses the agile methodology as a motivator for developing a DevOps culture." As far as he's concerned, when it comes to developing software faster and maintaining software more efficiently, both have a big role to play. "The two terms are certainly different; the former focuses on an iterative approach to development, and the latter brings two traditionally separate practices together Development and Operations, [which are] normally isolated. But the ultimate goal of each one is to create further collaboration," Kinard continued. "So, while Agile and DevOps each refer to two different things, use one to enable the other," he concluded.

Finally, Singaraju shared that the best benefit of the Agile methodology is that it enables organizations to develop applications that are driven by user needs. "Any company, big or small that would like to develop applications that are driven by user needs, and want to create products for the market at a faster pace should adopt Agile development practices," Singaraju said.

As for DevOps, Singaraju explained that it's perfect for innovating faster and continuously improving applications. "Companies that would like to innovate faster and be a market leader should have the ability to deliver a quality product at an accelerated frequency. Most of the largest technology companies and market leaders take a DevOps first approach to product delivery," Singaraju said.

Final Thoughts

With these insights in mind, it's clear to see that both Agile and DevOps seek to bring the end-user value, in a more efficient way — but from different angles. Agile focuses on making developers and development cycles more efficient, while DevOps brings the operations team into play to enable continuous integration and continuous delivery.

According to Dave West, who penned an article for [DevOps.com](#), "their [Agile and DevOps'] emphasis also varies, leading people to believe that they are different things: Agile emphasizes team interactions, culture, and values, while DevOps emphasizes delivery pipelines and flow."

 3 Comments



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I had understood that DevOps originally meant the teams responsible for developing systems taking responsibility for operating the production service. This I understood as the people who most understand the behaviour, users, purpose and are most able to problem solve are those who built the system. This interpretation of merely bringing operations and development closer doesn't feel like a step-change to me, simply a push to work more closely together (not a bad thing in itself, but not DevOps as I understand it). The removal of CAB, the promotion of development teams from 3rd to 2nd line support, increased automation, transfer to cloud, and removal of seperate teams of DBAs, SysAdmins etc. is intended to increase flow of value to customers while removing bottlenecks and friction points. I believe simply bringing an Ops team closer to the Development teams doesn't achieve this.

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**Kaya Ismail** → the_original_long_john_silver • 2 days ago

Hey, thanks for the comment! I think your definition is solid. I don't see that the article gives a different definition, though. Less detailed perhaps, but not different.

As Tyler Duzam, one of the experts quoted, puts it, "DevOps is a methodology that combines software development (Dev) with operations (Ops)."

So, it's not about bringing them closer together, as you mentioned. It's about combining them. It doesn't necessarily mean you're firing your entire Operations team, it means you combine and unify the two teams to achieve the goals you listed.

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**Ian Buchanan** • 2 days ago




This article's strongest answer to the title's question is in the summary, "Agile focuses on making developers and development cycles more efficient, while DevOps brings the operations team into play to enable continuous integration and continuous delivery." Unfortunately, the rest of the article takes a journey through the world of Agile and DevOps as methodologies, which is a perspective that thought-leaders in both communities sharply deny.

Consider what the PMI writes about why Agile is not a methodology, "Many approaches align with the values and principles set forth in the Agile Manifesto. Some of these approaches, such as Scrum, are methodologies. A methodology is a documented set of practices, techniques, procedures and rules intended to be used repeatedly and consistently to manage certain types of

work. A methodology prescribes an ordered approach to tasks and activities so that practitioners build experience with successfully applying the specific practices and continuously improve upon previous applications." <https://www.pmi.org/agile-p...>

Agile and DevOps are better defined as communities or schools of thought, characterized more by active participation in on-line and in-person dialog and sharing, than by a set of "best practices" that organizations should follow. Twisting these into methodologies is like trying to define the Linux meetup or the re:Invent conference in terms of how attendees do work. When Agile and DevOps are understood as communities, it's no more surprise that people can be members of both sets, than it is that people can go to their local Linux meetup and re:Invent.

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