

DevOps At Scale: Chapter 2



Benefits of DevOps Strategy

PLUTORA

DevOps: It's one of those things that, when you ask five people in a room what it is, each one will come up with a different but equally right answer. So, what does DevOps really mean? At its most basic sense, DevOps is a collaborative approach that unifies the development and operations teams in an organization. And it changes how the two teams go about performing their tasks. Contrary to the popular beliefs, DevOps is neither just a process nor is it all about the tools. DevOps is a culture—a philosophy that changes how different teams in a company work to achieve business goals. And it's only supported by tools and processes.

There are virtually innumerable benefits that DevOps brings to the table. This article covers some of the major DevOps benefits and explains how it can positively impact your business workflows.



Collaboration

The software methodologies preceding DevOps did not recognize the value that Dev, Ops, and QA teams can bring if they coexist. But, they didn't lay stress on fostering collaboration among the teams. So, it wasn't until DevOps came into existence that there was genuine encouragement for collaboration among departments, changing how they work as a unit.

DevOps is an improvisation on lean and agile software development methodologies, as it draws focus toward operations as well. So, DevOps promotes an environment where the different teams work together to achieve common organizational objectives. This means that the teams in your organization won't be isolated and won't work toward department-specific goals anymore. However, the large enterprises might

still use multiple tools to get the job done. DevOps facilitates collaboration by breaking down the silos among Dev/Ops/QA teams and encourages them to work together toward a single goal: Creating more value for your organization, which will ultimately help you deliver more value to your customers.

Rest assured, working collaboratively has its perks. Engineers no longer care only about how their team can execute their tasks efficiently—because all of them are accountable for the end product. Conversely, it motivates people from different departments to come together and brainstorm the areas of improvement in the operational workflow of a product. Such collaboration also cross-trains your employees, as it gives them a chance to extend and upgrade their technical expertise to areas that don't strictly fall under their specialization. So, it's sort of a win-win for both your business and your employees.



Speed

One of the inherent benefits of DevOps is that it accelerates the pace at which your business generally functions.

The faster you release great software, the faster you can embrace the business value of the product features. The time taken for testing a product depends on the availability of a test environment. For updates/upgrades in software, the testing time is usually reasonably fast due to the presence of a test environment. However, testing a new product consumes a lot of time because the operations team will have to create a test environment. DevOps speeds up the pace at which you deliver your software features and modifications through automated testing and integration. DevOps makes your developers keep an eye on the product

throughout its entire life cycle for any software updates or bugs. This decreases the time to monitor, locate, and fix bugs, which accelerates your time to market. You can also use Value Stream Mapping in DevOps. It will help you identify production bottlenecks and non-value adding processes. You'll be able to work towards fixing them, and as a result, create value faster.



Innovation

For most people, DevOps might only mean doing stuff faster at reduced costs. But, there's one other clinical advantage that's often overlooked—business innovation. One can define business innovation as a process of brainstorming new ideas, which, when implemented, will streamline operational workflows and add value to an

organization. Very often, innovation occurs by tweaking an existing process or system, building new ones, or introducing a better alternative to an outdated process.

DevOps holds the key to unlock software development innovation. We've seen how DevOps allows you to deliver your software products rapidly. Such rapid software delivery frees up some of your developers' time, so they can instead spend it experimenting with any additional features or improving the effectiveness of the existing ones. Developers can validate the feasibility of such ideas by performing proof of concept and proceeding according to the results with minimal disruption to the current project.

DevOps nurtures innovation by enabling the teams to learn more and better understand customer expectations. Innovation typically stems from brainstorming different perspectives and bouncing ideas off each other. DevOps cultivates and encourages such an environment where the developers are not restricted to a set of inflexible instructions. This means that the scope of any given

project is always open for innovation as long as the end results are met. For instance, an idea that one of your employees develops for an application might not be feasible with that particular product in context, but might do a great job with another application. The by-product of such collaborative working are ideation and rapid testing that DevOps turns to innovation. Thus, DevOps simply enables such an environment and gives your software delivery the space that it needs to thrive successfully.

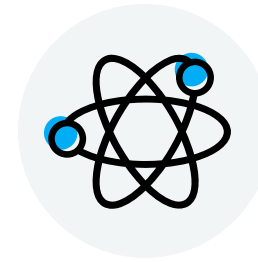


Customer Satisfaction

Customer satisfaction is one of those things that can make or break your business. It's crucial for your business to thrive because winning new customers is manifold expensive than retaining the existing ones through boosted customer

satisfaction. One of the core benefits of DevOps, thankfully, is enhanced customer experience—and, ultimately, customer satisfaction.

Feedback loops are an important component of any DevOps adoption. In most cases of enterprise software development, feedback loops enable the end users—typically the customers—to track the progress of the application build at various stages and suggest any desired modifications. Feedback loops are generally dynamic in nature and will help you ensure that your end-users and developers are on the same page with respect to the application that's being developed. Your customers hate to wait for your products, and the longer you make them wait, the worse the adverse impact caused. As discussed earlier, DevOps accelerates software delivery, which will directly impact and have a positive effect on customer satisfaction. Also, since DevOps streamlines the different aspects of your workflow, you'll be able to offer your products at a lower cost when compared to a competitor who doesn't do DevOps.



Agility

The demands of modern-day customers are intense in terms of product complexity and time. To combat such challenges and to stay ahead of the competition, enterprises have to infuse agility into their processes.

In this context, agility is more of an umbrella term, and it encompasses various advanced capabilities. DevOps ticks all the boxes that are widely considered as subsets of agility, thus equipping businesses to be more agile. For instance, DevOps practices allow an organization to be flexible when it comes to balancing its capacity as a consequence to demand fluctuations. It helps them understand how the customers use the products and their overall preferences to continuously deliver features that bring value to them. It also makes it possible to handle features and requirements for several

applications running on different platforms. Additionally, DevOps adoption improves the way change management is performed and ensures that it doesn't slow down and interrupt the current process. Besides this, it helps IT leaders overcome challenges that are typically caused due to siloed teams that carry out dissimilar isolated processes. But, you'll probably face some challenges when you use different tools across teams, and we can help you deal with them.



Quality and Reliability

The quality of your software is important for obvious reasons, and DevOps can help you maximize that quality. DevOps changes the way organizations perform their traditional software testing. It makes testing a critical component throughout the SDLC and distributes its responsibility to all the engineers involved. It inspires exploratory testing, which can enhance software quality by figuring out ways to effectively test aspects of produced software.

Service reliability is another important takeaway from a good DevOps approach. Reliability is simply the ability of a system to function seamlessly within its environmental constraints on a consistent basis. DevOps adoption improves service reliability, as it improves the availability and connectivity of services needed for the smooth running of a business.



Security

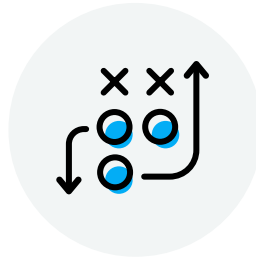
Another integral benefit that a good DevOps strategy will bring is strengthened security.

Sure, you'll have to deliver your products at a rapid speed to run your business successfully. But, it'll all be futile if you turn a deaf ear to security just so you can save some time. Besides, the rate of cybercrime has been increasing and is costing companies millions of dollars through data breaches. So, how do you equip yourself to deal with it? This is where DevSecOps comes into the picture, and it takes care of the security aspect of your applications.

But, what is it? DevSecOps extends DevOps' core components of development and operations and introduces security as a separate component in the pipeline. The essence of DevSecOps is that everyone—and not just the security teams—is

responsible for security. DevSecOps helps reduce costs; with it, you'll be able to track and detect security issues in the early stages of development as opposed to spending tons of money on security after the product's release.

DevSecOps follows the philosophy of constant iterative improvements, which makes the whole process of managing security a lot easier. It also accelerates the speed of recovery if and when any security incidents happen. Implementing DevSecOps will bring in other viable takeaways, such as minimized vulnerabilities and insecure defaults and enhanced code coverage, while also invigorating secure design patterns in the workflow.



Competitive Advantage

The saying “every business is a software business” is becoming irrefutably true in this age, and the recent boom of software companies corroborates the statement. Every organization should be capable enough to ensure that the wave of competitiveness doesn't carry them away. DevOps implementation can be the trump card in providing that competitive advantage. The major differentiating factors that help a business to be competitive are quicker software releases, high quality features, continuous feedback incorporation, and maximized ROI. The benefits reaped through DevOps tick all of the above boxes. This results in a powerful competitive advantage over those who haven't embraced DevOps.



Costs Reduction

Arguably, a solid DevOps strategy's biggest benefit from a business perspective is maximizing profitability. Interestingly, there are multiple ways through which DevOps cuts down the costs incurred in a business—either directly or indirectly.

Network Downtime Costs

Network unavailability can be catastrophic. Companies pay the price in billions for network downtime. What's worse than losing oodles of money in a business? Losing oodles of money and customers. In today's fast-paced IT, you simply can't afford to have frequent network disruptions. There are a number of alternate software service providers available these days. So, it might not take long for your customers to jump ship because of recurring network downtime.

So, what's the root cause for such downtime, and how does DevOps help you minimize it? The most common causes are bug-ridden code, poor service visibility, and overloaded infrastructure utilization. DevOps, with its automated testing and continuous integration (CI) and continuous delivery (CD) practices, can help developers produce more efficient code and also identify and fix bugs quickly. Application performance monitoring (APM) tools can project in-depth visibility to all the stakeholders involved, as they can monitor and track changes consistently. Another core feature of APM tools is traceability, which will churn out detailed information about what's happening in your code and how it impacts the end-users. Such detailed traces can also help you identify the root cause of issues. Cloud-based infrastructure can be very handy in managing your infrastructure. Thus, DevOps helps organizations combat network downtime and, consequently, save money.

Software Release Costs

Managing an organization's software releases can get complex and expensive—especially when you're dealing with a large number of simultaneous

releases. If you've been there before, you'd know how much chaos it can cause. That's why you should strongly consider shaking hands with DevOps. By automating your release pipeline, DevOps enables you to release your software faster. It also reduces the manpower needed for the process and slashes software release costs significantly.

Other Costs

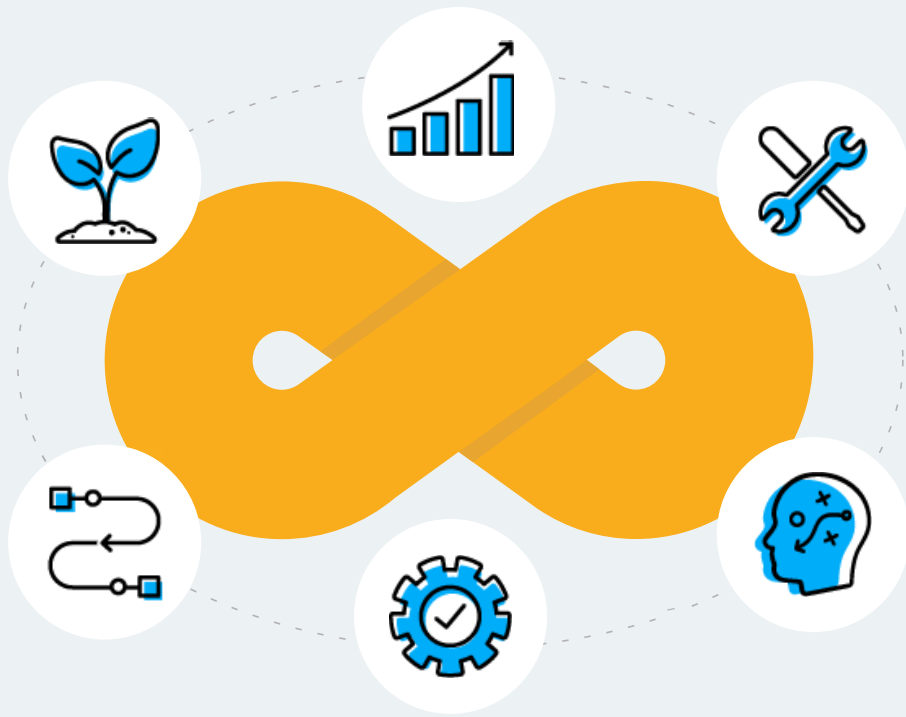
Additionally, adopting microservices in a DevOps environment is an excellent idea. Microservice applications are built on modular code, which is a DevOps best practice. It results in increased elasticity, which improves how your applications respond to varying workloads. That's how it'll help you reduce your infrastructure costs by a huge margin. DevOps also speeds up the rate at which you can implement your customer feedback into production, helping you save money. The principles of DevOps make the process proactive. So, you'll also minimize the financial damage incurred should you do a disaster recovery at some point in the future.

Conclusion

One can infer from this information that the technical as well as business benefits of DevOps are massive. To summarize, a solid DevOps strategy and successful implementation can entirely streamline your end-to-end delivery pipeline. It starts right from the core software quality all the way to inculcating customer feedback loops to ensure that your products are in line with the customer requirements and expectations. Of course, you'll face a lot of challenges along the way, such as the employee mindset barriers and a general resistance to change, to name a few. But, once you successfully overcome those initial challenges, DevOps will truly redefine how your business operates.

If you don't do DevOps in your organization yet, you must seriously consider adopting its practices. Despite any reasons that might be holding you back, the advantages of DevOps are just too big to ignore. Our service offerings can kick-start your DevOps journey and help you in achieving DevOps maturity.





Want to learn more about DevOps?

Check our series of white papers about DevOps to learn from the foundations, to the cultural change and maturity model.

1. What is DevOps?
2. The Benefits of DevOps Strategy
3. DevOps Methodology: Aligning your Organization
4. DevOps Tools: Why You Need Them
5. The DevOps Maturity Model
6. DevOps Pipeline: The Functional Building Blocks
7. Mastering the DevOps Process
8. Making your DevOps + Agile Transformation a Success

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About Plutora

Plutora, the market leader of value stream management solutions for enterprise IT, improves the speed and quality of software creation by capturing, visualizing and analyzing critical indicators of every aspect of the delivery process. Plutora orchestrates release pipelines across a diverse ecosystem of development methodologies, manages hybrid test environments, correlates data from existing toolchains, and incorporates test metrics gathered at every step. The Plutora Platform ensures organizational alignment of software development with business strategy and provides visibility, analytics and a system of insights into the entire value stream, guiding continuous improvement through the measured outcomes of each effort.

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