Joseph Ayo

CSD 380

5/31/25

Bellevue University

The History of DevOps – An Analysis

Let’s talk about DevOps. DevOps is a name for a cultural movement within the software development and IT communities, that aims to bridge the divide between the two. The origins of this movement stem from dissatisfaction with the legacy method of approaching software development, the Waterfall model. This model approaches application development in a structured, step-by-step process; Establish your requirements, design your elements, implement them, test them, and maintain them. This basic structure was proven to be effective; however, many were dissatisfied with the amount of time required to execute this method of development. Thus began the DevOps movement, in which new approaches were created to resolve this downside of traditional development methods. The roots of DevOps can be traced through several pivotal movements, including the Lean movement, the Agile Manifesto, and the Continuous Delivery movement. Together, these influences laid the foundation for what has become one of the most transformative shifts in software engineering.

The Lean movement, which began in the late 90’s and 00’s, cropped up as one of the first major steps in the DevOps movement. The Lean movement emphasized the principles of eliminating wasteful steps in the process of development, as well as the continuous optimization of workflow. Companies were beginning to seriously study, analyze, and improve the structure of their development process to output a superior product in less time. This movement also introduced the concept of ‘flow’, quite literally putting the ‘flow’ into ‘workflow’.

The Agile Manifesto was a new philosophy behind software development that emerged in 2001, published by a certain group of software developers (Link to this in source page). In this document lies the foundations of Agile-style development. Agile methodology focuses on customer collaboration, working with software directly, and responding to change, as opposed to the rigid processes and documentation of Waterfall. Agile methodologies like Scrum and Extreme Programming quickly began gaining popularity, due to how it enables teams to develop software in short, iterative cycles while giving continuous feedback.

Popularized by Jez Humble and David Farley in their 2010 book ‘Continuous Delivery’, the Continuous Delivery movement advocates for making software deployable at any time through automated testing, integration, and deployment pipelines. These concepts blend the foundations of the Lean movement with the principles behind the Agile-method development style. What this resulted in was a significant reduction in deployment risk (and through this, enhanced product security), as well as speeding up the feedback loops that occur during development, which was one of the main goals of the DevOps movement.

The Lean movement, Agile Manifesto, and the Continuous Delivery movement all work together, each contributing elements of what would become the essence of what the DevOps movement sought to achieve. Through these innovations, software development has reached new levels of efficiency, greatly increased throughput and boosted collaborative efforts with a new, iterative process that Agile style development encourages.

Sources:

“EverythingDevOps.” *Everythingdevops.dev*, 2023, [www.everythingdevops.dev/blog/a-brief-history-of-devops-and-its-impact-on-software-development](https://www.everythingdevops.dev/blog/a-brief-history-of-devops-and-its-impact-on-software-development).

‌ IAN BUCHANAN. “History of DevOps.” *Atlassian*, [www.atlassian.com/devops/what-is-devops/history-of-devops](https://www.atlassian.com/devops/what-is-devops/history-of-devops).

Beck, Kent, et al. “Manifesto for Agile Software Development.” *Agile Manifesto*, 2001, agilemanifesto.org/.

‌

‌