The History of DevOps

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Technology is a never-ending evolution, and organizations are trying their best to improve the speed, quality and reliability of their software development. DevOps is a set of practices, principles, and cultural philosophies designed to improve collaboration and communication between software development (Dev) and IT operations (Ops) teams (Kim et al., 2016). Between 2007 and 2008, DevOps was born out of growing frustration with the inefficiencies caused by siloed development and operations teams. As highlighted by Buchanan (Atlassian, 2025), traditional software models often created tension between developers and IT, leading to miscommunication, delayed releases, and customer dissatisfaction. By building upon earlier movements such as Lean, Agile, and Continuous Delivery, DevOps transformed the way organizations approach software development and operations, fostering a culture of transparency and shared responsibility.

Henrey Ford wanted to simplify the complex process of building cars, so he created the assembly line which allowed for an efficient assembly of vehicle components within minutes, leading to the production of over 15 million cars between 1908 and 1927. In 1950s Eiji Toyoda and engineer Taiichi Ohno, sought to adapt Ford's principles to the Japanese context, where they introduced tools like Value Stream Mapping, kanban boards, and Total Productive Maintenance which helped create Lean Movement (Skhmot, 2017). Lean is about working smarter, reducing waste and making the customer happy in an efficient way.

In 2001, seventeen experienced software developers grew frustrated with slow and rigid methods like Waterfall. So, they came together to create the Agile Manifesto, a lightweight framework based on shared values and principles that emphasized flexibility and collaboration (Kim et al., 2016). Drumond explains “companies were so focused on excessively planning and documenting their software development cycles that they lost sight of what really mattered—pleasing their customers.” (Drumond, n.d). Agile redirected the focus toward collaboration, communication, and customer value which improved interaction between developers, stakeholders, and the customers.

Continuous Delivery applies the same ideas as Lean movement since it took inspiration from it. It focuses on producing software in small, frequent batches, testing continuously throughout the process, and keeping the code always ready for deployment (Kelly & Fenton, 2022).

Beyond just integrating code, CD emphasizes automated testing across multiple levels which ensures that changes are validated thoroughly before reaching production, reducing the risk of bugs and downtime.

DevOps combines Lean, Agile, and Continuous Delivery to create a fast, efficient, and collaborative software development process. Lean brings the focus on reducing waste and optimizing flow, ensuring teams only build what delivers real value. Agile contributes frequent communication, teamwork, and iterative development, helping all teams like developers, operations, and stakeholders work together to solve problems faster. Continuous Delivery brings automation to building, testing, and deploying software, so code is always ready for release with minimal risk. Together, DevOps ensures software moves smoothly from development to production: teams work efficiently, collaborate closely, and release updates rapidly and reliably

References

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