**Introduction to DevOps**

DevOps is a cultural and technical practice that merges software development (Dev) and IT operations (Ops) to improve collaboration and streamline the deployment of software. Originating from the limitations of traditional, siloed approaches, DevOps arose to enhance efficiency and quality across the development lifecycle by combining continuous integration, delivery, and deployment.

**The Lean Movement**

**Background**: Lean principles emerged from Toyota’s manufacturing system in the mid-20th century, emphasizing waste reduction, just-in-time production, and continuous improvement.

**Core Values**: Lean focuses on maximizing value for customers by eliminating non-value-adding activities (waste). It introduced practices like Value Stream Mapping, Kaizen (continuous improvement), and Pull Systems.

**Influence on DevOps**: Lean’s emphasis on improving flow and reducing bottlenecks has directly influenced DevOps. For example, Value Stream Mapping is widely used in DevOps to visualize workflows and pinpoint inefficiencies, helping teams to streamline software delivery.

**The Agile Manifesto**

**Background**: Developed in 2001 by software practitioners, the Agile Manifesto introduced principles focused on flexibility, iterative development, and customer feedback. Its core values prioritize “individuals and interactions” and “responding to change” over rigid processes and documentation.

**Core Principles**: Agile encourages adaptive planning, collaborative work, and incremental releases to quickly adapt to changing requirements and feedback.

**Influence on DevOps**: Agile methodologies laid the groundwork for iterative software development, which DevOps builds upon by extending Agile principles to operations teams. By fostering cross-functional collaboration and continuous integration, Agile aligns with DevOps’ goal of reducing development cycles and improving customer satisfaction.

**The Continuous Delivery Movement**

**Background**: Emerging from Agile, the Continuous Delivery (CD) movement emphasizes deploying software in shorter, reliable cycles through automation. By using automated testing and integration, CD reduces risks associated with large releases.

**Core Principles**: CD advocates for small, manageable changes to code that can be tested, integrated, and deployed quickly. Tools like Jenkins, Travis CI, and CircleCI are popular in this space.

**Influence on DevOps**: Continuous Delivery aligns closely with DevOps by making rapid, frequent deployments a reality. DevOps emphasizes CD as a cornerstone, focusing on automation and pipeline reliability to ensure teams can push new code frequently without disrupting the user experience.

Today, DevOps is integral to many companies, supporting faster time-to-market, enhanced collaboration, and a culture of continuous improvement. It combines Lean, Agile, and Continuous Delivery to create a framework that enables teams to deliver software at high velocity.

DevOps is a product of several movements that emphasize efficiency, agility, and reliability. By integrating Lean principles, Agile methodologies, and Continuous Delivery, DevOps has transformed software delivery to meet the demands of modern businesses.

<https://www.atlassian.com/devops>

<https://everythingdevops.dev/a-brief-history-of-devops-and-its-impact-on-software-development/>