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Introduction to DevOps

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Agenda

Understanding DevOps

- DevOps Misconception
- DevOps Anti-Patterns
- Three Dimensions of DevOps
  - Process
  - People
  - Tools

DevOps Misconception

DevOps Myths & Misconception

- DevOps is a Team
- CI/CD is all about DevOps
- Non-Compliant to Industry Standards

An additional team is likely to cause more communication issues

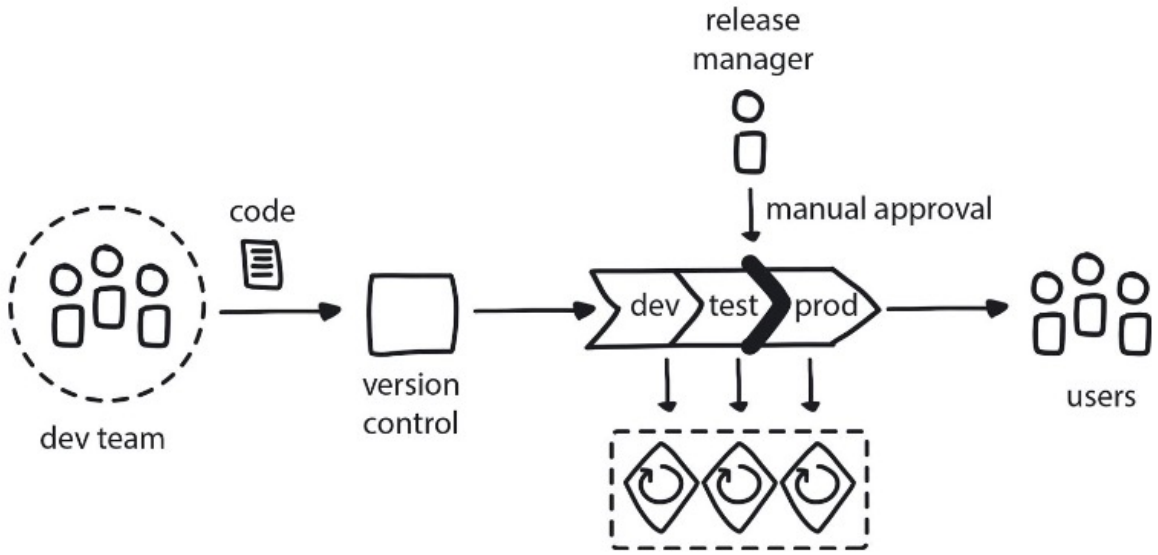
Scalability
Consistency
Reliability

Regulations implement control in order to be compliant
Controls reduce the risk that may affect the confidentiality, integrity, and availability of information

DevOps Misconception

DevOps Myths & Misconception

- Automation eliminates ALL bottlenecks
- “Universal" Continuous Delivery pipeline
- All about Tools
- Release as fast as Amazon / Facebook



Improve the partnership b/w dev test & Ops

It increases feedback loops
However Hand off processes can often add to process wait states

Empowered smaller self-sufficient teams and Continuous Delivery Engineer

Processes to fit organizational and busin needs — not vice-versa

Mandating tools developers can use.
Prioritizing tools over people

DevOps Anti-Patterns

Anti-Patterns

- Blame Culture
  - A blame culture is one that tends toward blaming and punishing people when mistakes are made, either at an individual or an organizational level
- Silos
  - A departmental or organizational silo describes the mentality of teams that do not share their knowledge with other teams in the same company
- Root Cause Analysis
  - Root cause analysis (RCA) is a method to identify contributing and “root” causes of events or near-misses/close calls and the appropriate actions to prevent recurrence
- Human Errors
  - Human error, the idea that a human being made a mistake that directly caused a failure, is often cited as the root cause in a root cause analysis

Lessons of History

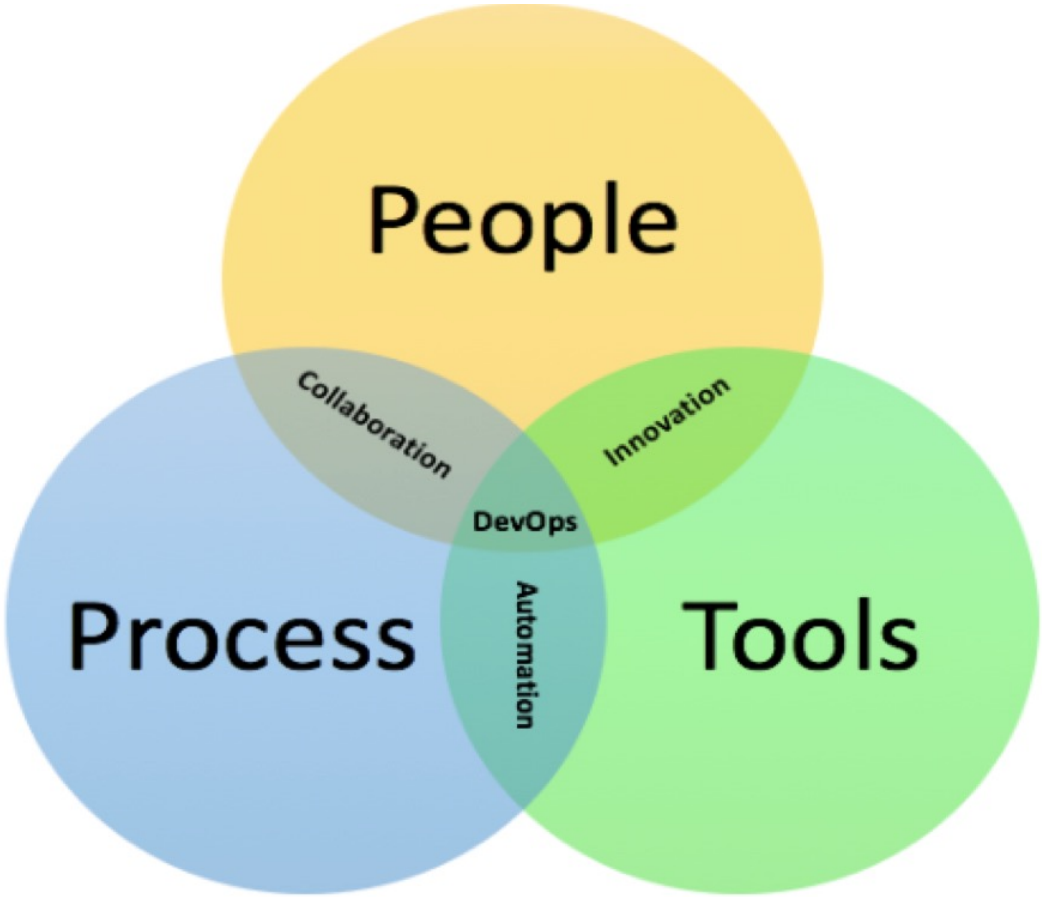
Example for Silos

- TVS India
  - T. V. Sundaram Iyengar
  - Founded in 1978

DevOps Dimensions

Three dimensions of DevOps

- People
- Process
- Tools / Technology



DevOps - Process

DevOps and Agile

- We need processes and policies for doing things in a proper way and standardized across the projects so the sequence of operations, constraints, rules and so on are well defined to measure success
- One of the characterizations of DevOps emphasizes the relationship of DevOps practices to agile practices
- We will focus on what is added by DevOps
- We interpret transition as deployment

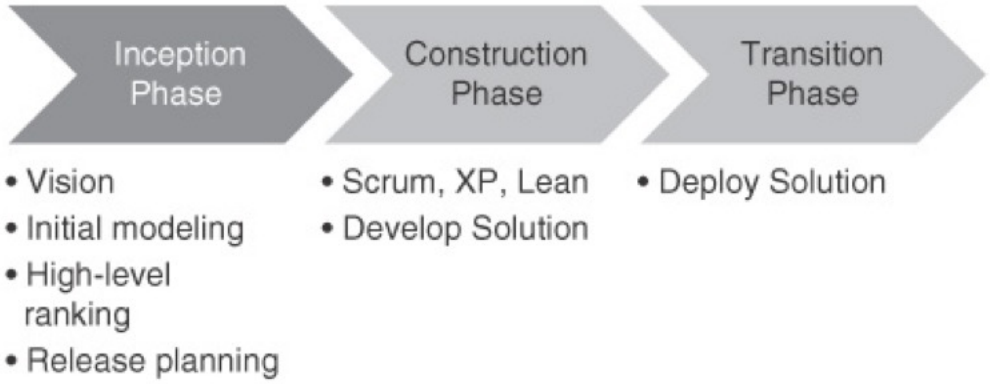


FIGURE 1.2 Disciplined Agile Delivery phases for each release. (Adapted from *Disciplined Agile Delivery: A Practitioner's Guide* by Ambler and Lines) [Notation: Porter's Value Chain]

DevOps and Agile

DevOps practices impact all three phases

- Inception phase : During the inception phase, release planning and initial requirements specification are done
  - Considerations of Ops will add some requirements for the developers
  - Release planning includes feature prioritization but it also includes coordination with operations personnel
- Construction phase: During the construction phase, key elements of the DevOps practices are the management of the code branches,
  - the use of continuous integration
  - continuous deployment
  - incorporation of test cases for automated testing
- Transition phase: In the transition phase, the solution is deployed and the development team is responsible for the deployment, monitoring the process of the deployment, deciding whether to roll back and when, and monitoring the execution after deployment

Thank You!

In our next session: