Welcome to CLOUD & DEVOPS WORLD...

DEVOPS Fundamentals

Cloudz DevOps
Learn & Earn

support@cloudzdevops.com
https://cloudzdevops.com/

Context

- What is DevOps?
- Need of DevOps
- Waterfall vs Agile vs DevOps
- DevOps Benefits
- DevOps Lifecycle
- DevOps Tools

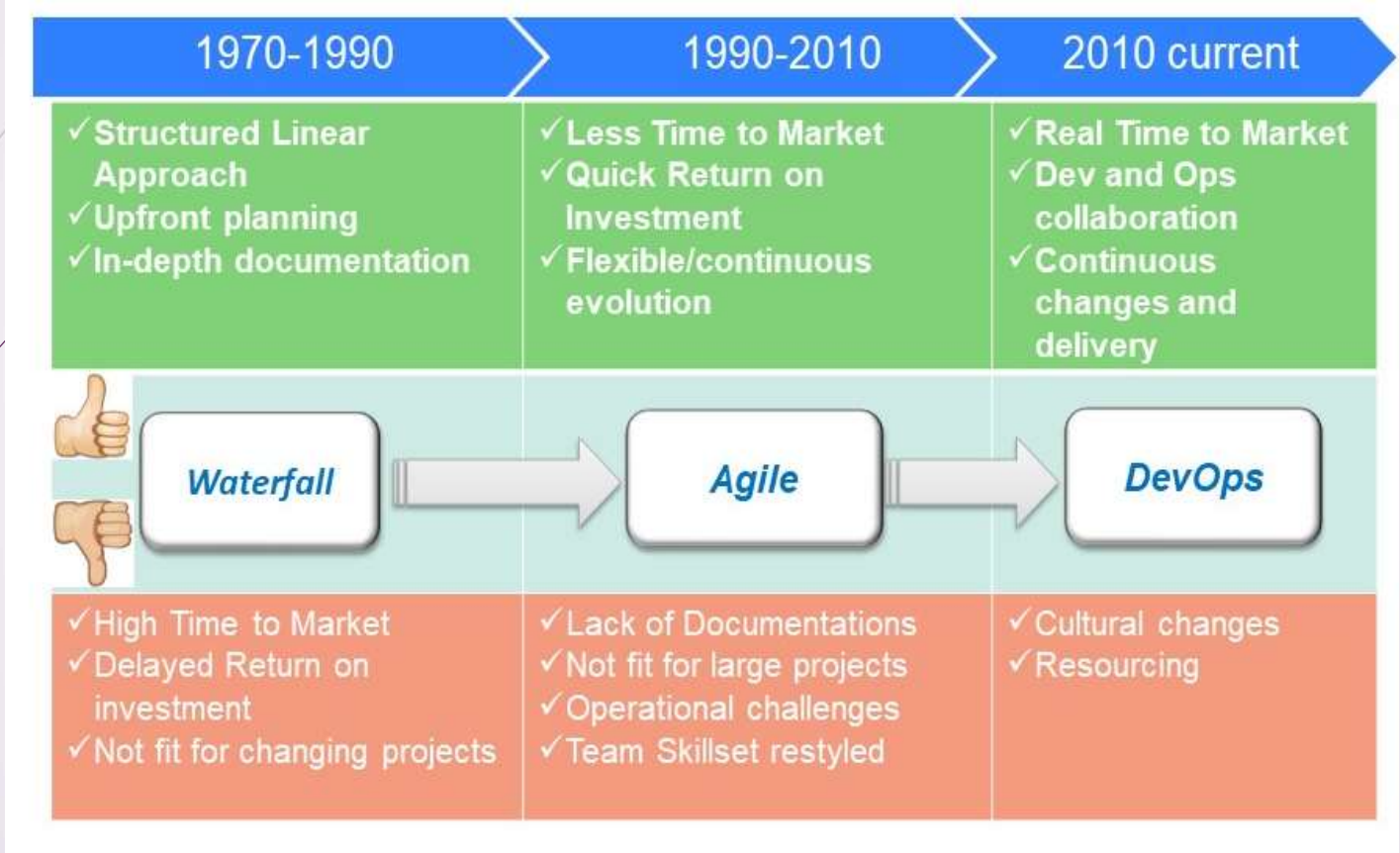
What is DevOps?

- **DevOps** is a collaboration between Development and IT Operations to make software production and Deployment in an automated & repeatable way.
- **DevOps** helps increase the organization's speed to deliver software applications and services. The full form of 'DevOps' is a combination of 'Development' and 'Operations.'
- **DevOps** can be defined as an alignment of development and IT operations with better communication and collaboration.

Need of DevOps

- Before DevOps, the development and operation team worked in complete isolation.
- Testing and Deployment were isolated activities done after design-build. Hence they consumed more time than actual build cycles.
- Without using DevOps, team members spend a large amount of their time in testing, deploying, and designing instead of building the project.
- Manual code deployment leads to human errors in production.
- Coding & operation teams have separate timelines and are not synch, causing further delays.

Waterfall vs Agile vs DevOps



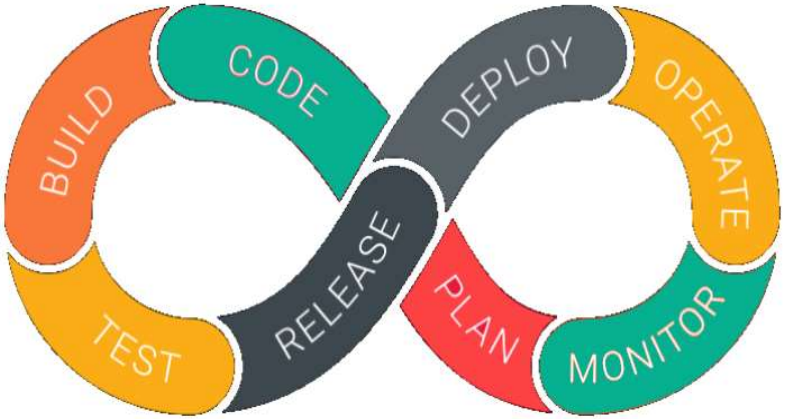
DevOps - Benefits

- **1. Predictability:** DevOps offers a significantly lower failure rate of new releases.
- **2. Reproducibility:** Version everything so that earlier versions can be restored anytime.
- **3. Maintainability:** Effortless recovery process in the event of a new release crashing or disabling the current system.
- **4. Time to market:** DevOps reduces the time to market up to 50% through streamlined software delivery. It is particularly the case for digital and mobile applications.
- **5. Greater Quality:** DevOps helps the team improve application development quality by incorporating infrastructure issues.
- **6. Reduced Risk:** DevOps incorporates security aspects in the software delivery lifecycle, and it helps reduce defects across the lifecycle.
- **7. Resiliency:** The Operational state of the software system is more stable, secure, and changes are auditable.
- **8. Cost Efficiency:** DevOps offers cost efficiency in the software development process, which is always an aspiration of IT management.

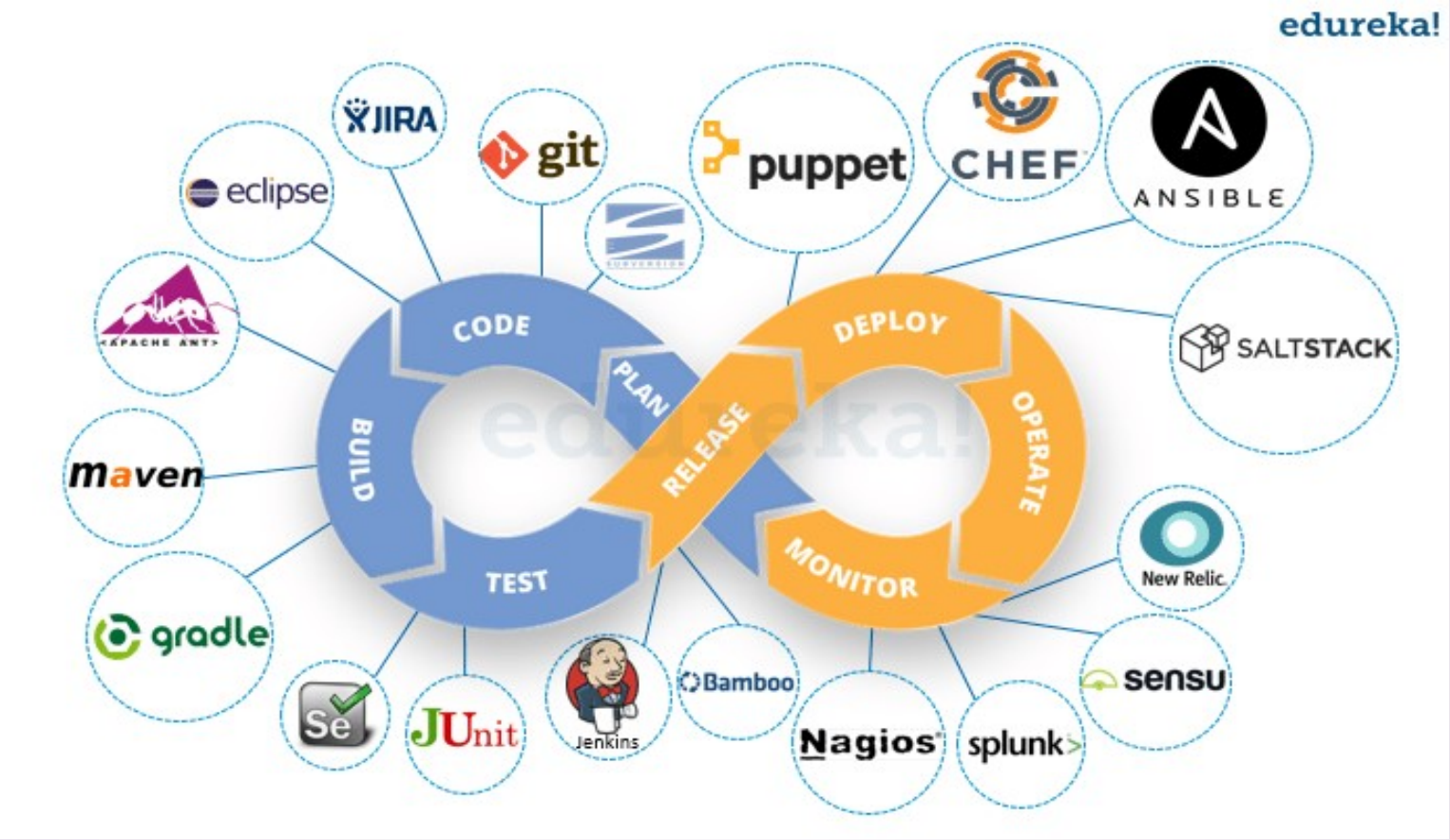
DevOps - Lifecycle

The DevOps Lifecycle is a series of development stages that guide everyone as efficiently as possible through the end-to-end process of product development. All of these components of the DevOps lifecycle is necessary to take the maximum leverage of the DevOps methodology.

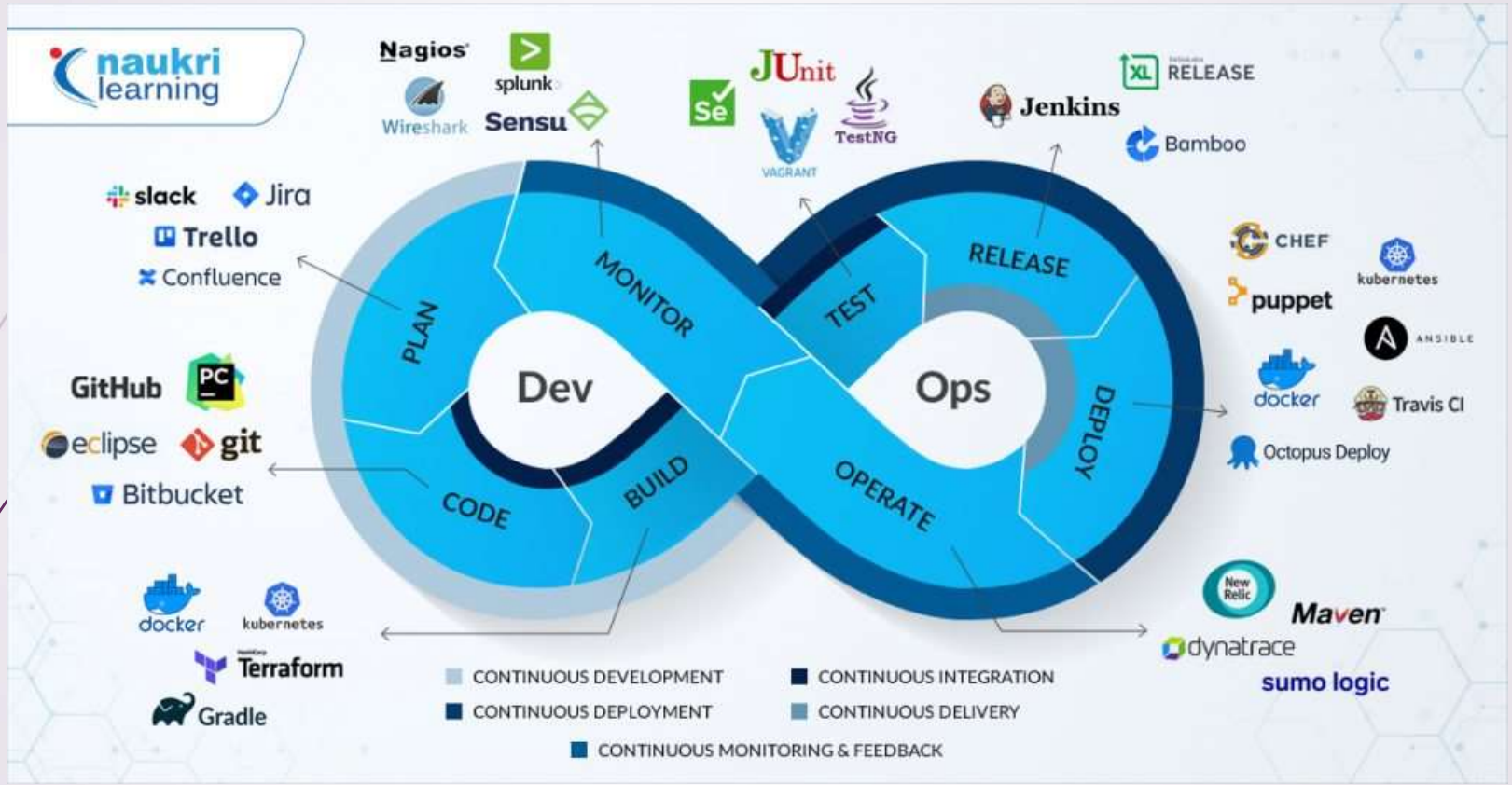
- Continuous Development
- Continuous Integration
- Continuous Testing
- Continuous Deployment
- Continuous Monitoring
- Continuous Feedback
- Continuous Operations



DevOps - Tools



DevOps - Tools



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Quiz: Top 10 DevOps Tool?

10. Splunk
9. Jenkins
8. Selenium
7. Puppet
6. Chef
5. Git
4. Ansible
3. Docker
2. Nagios
1. Kubernetes (K8s)

THANK YOU…