



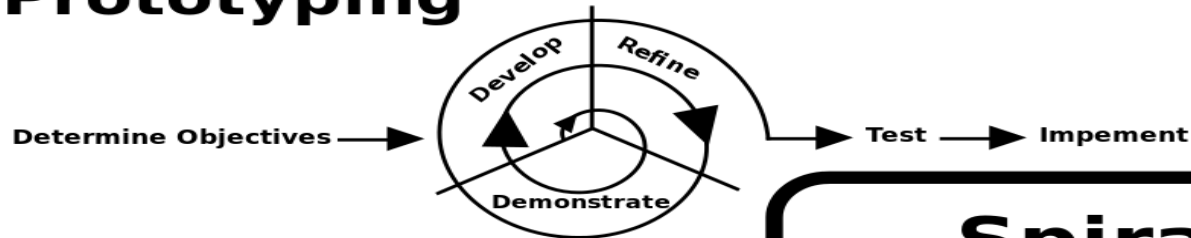
DEVOPS

AGENDA

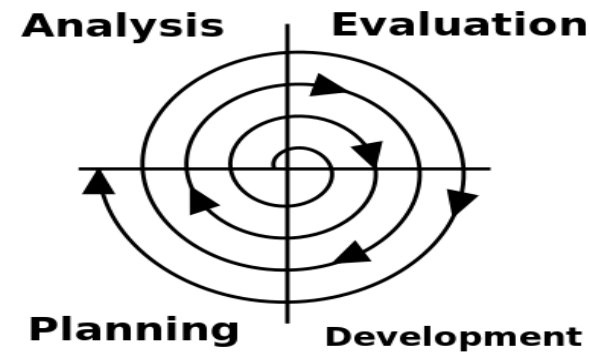
- What is Software Development Approach
- Why Devops
- What is Agile Methodology
- Difference between Devops and Agile
- Definition of Devops
- Pillars of Devops
- Roles in Devops
- Roles of Devops Engineer

SOFTWARE DEVELOPMENT MODELS

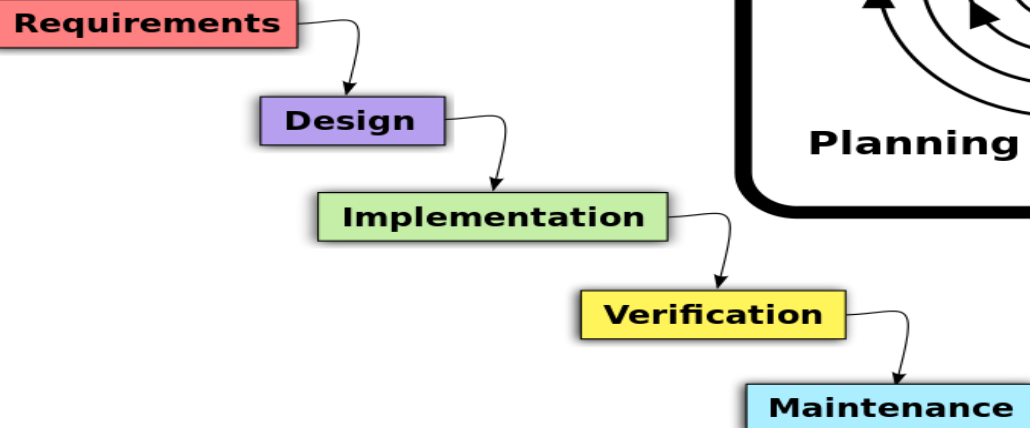
Prototyping



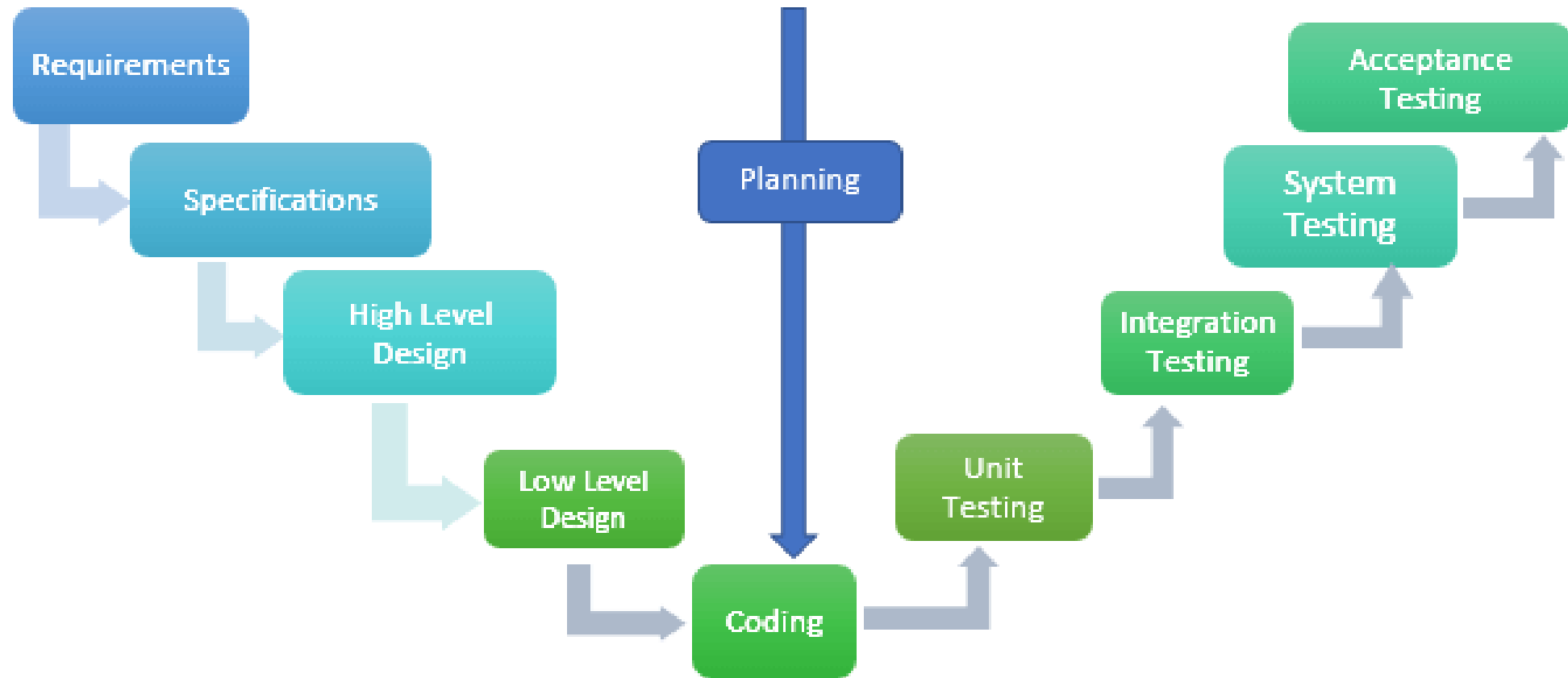
Spiral



Waterfall

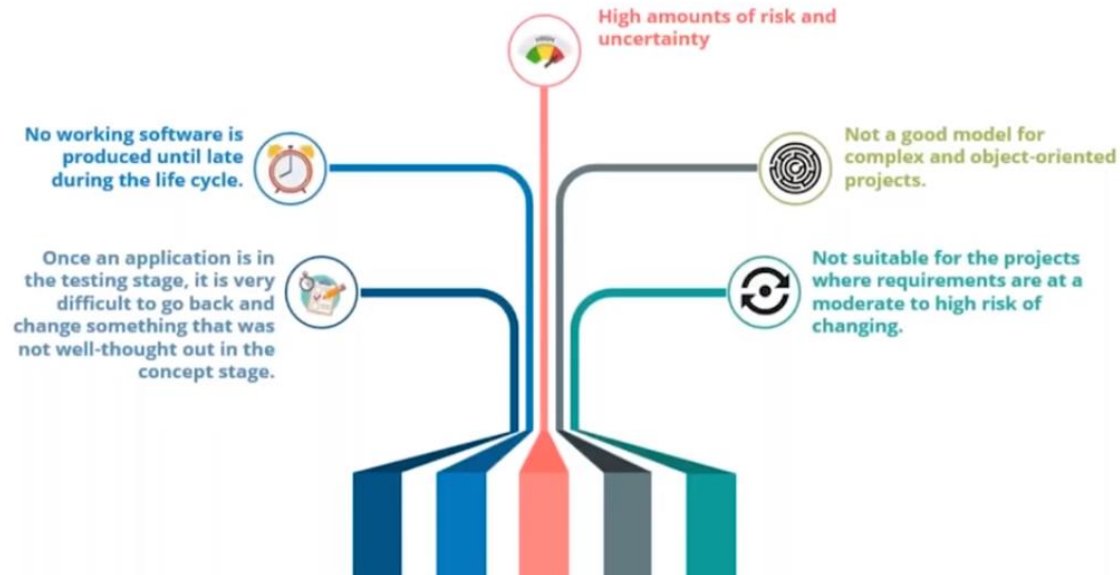


WATERFALL MODEL



SOFTWARE DEVELOPMENT APPROACH

Limitations of Waterfall Model



WHAT IS DEVOPS

- DevOps is a culture which promotes collaboration between Development and Operations Team to deploy code to production faster in an automated & repeatable way.
- The word 'DevOps' is a combination of two words 'development' and 'operations.'

DEVOPS

- An alignment of development and IT operations with better communication and collaboration.

What is DevOps?



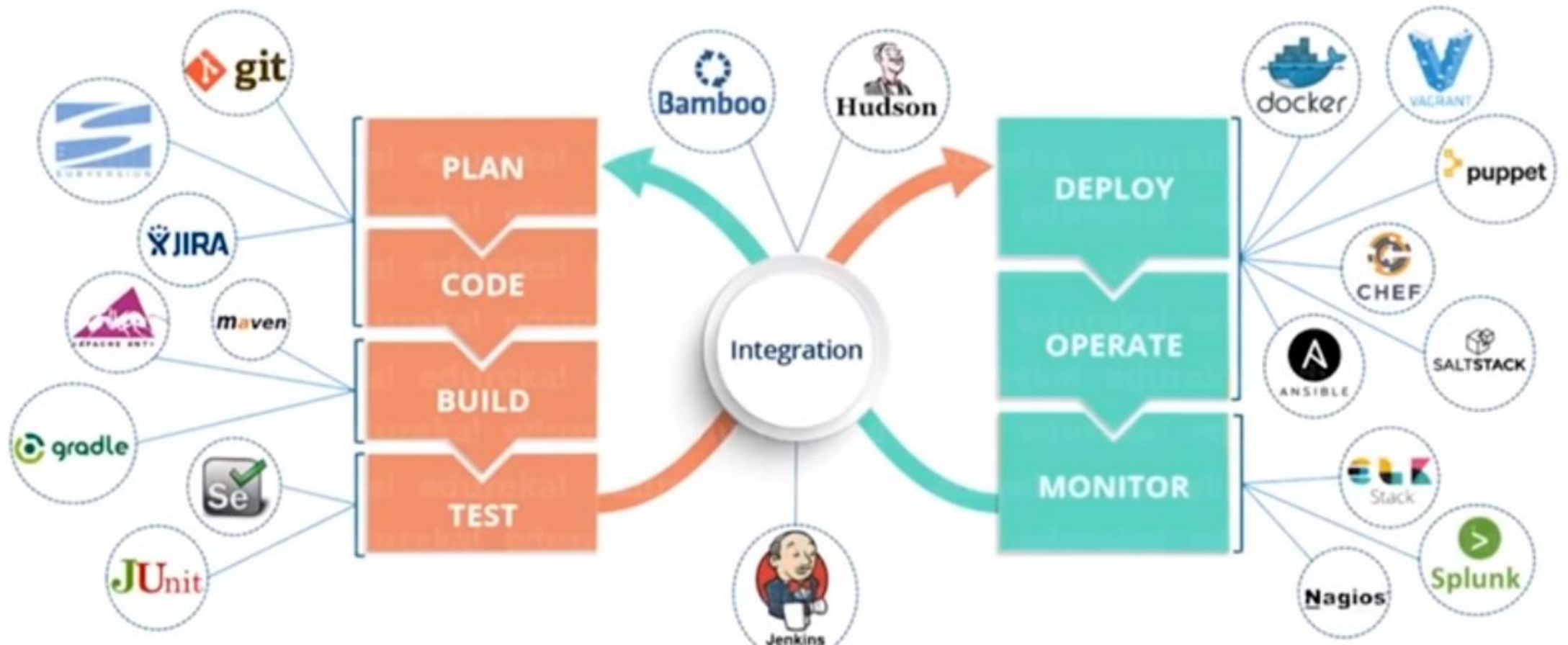
Developers & Testers

+



IT Operations

WHAT IS DEVOPS



ADVANTAGES

- Increase an Organization's speed to deliver application and services.
- Serve customer's better
- Compete more strongly in the market.

WHY DEVOPS?

- Predictability – Lower failure rates for new Releases
- Reproducibility – Earlier versions can be restored anytime
- Maintainability -
- Time to Market – streamlined software delivery
- Quality -
- Reduced Risk - Reduce defects
- Resiliency – Changes are Auditable
- Cost Efficiency -
- Breaks Larger code base into small chunks – follows Agile methodology

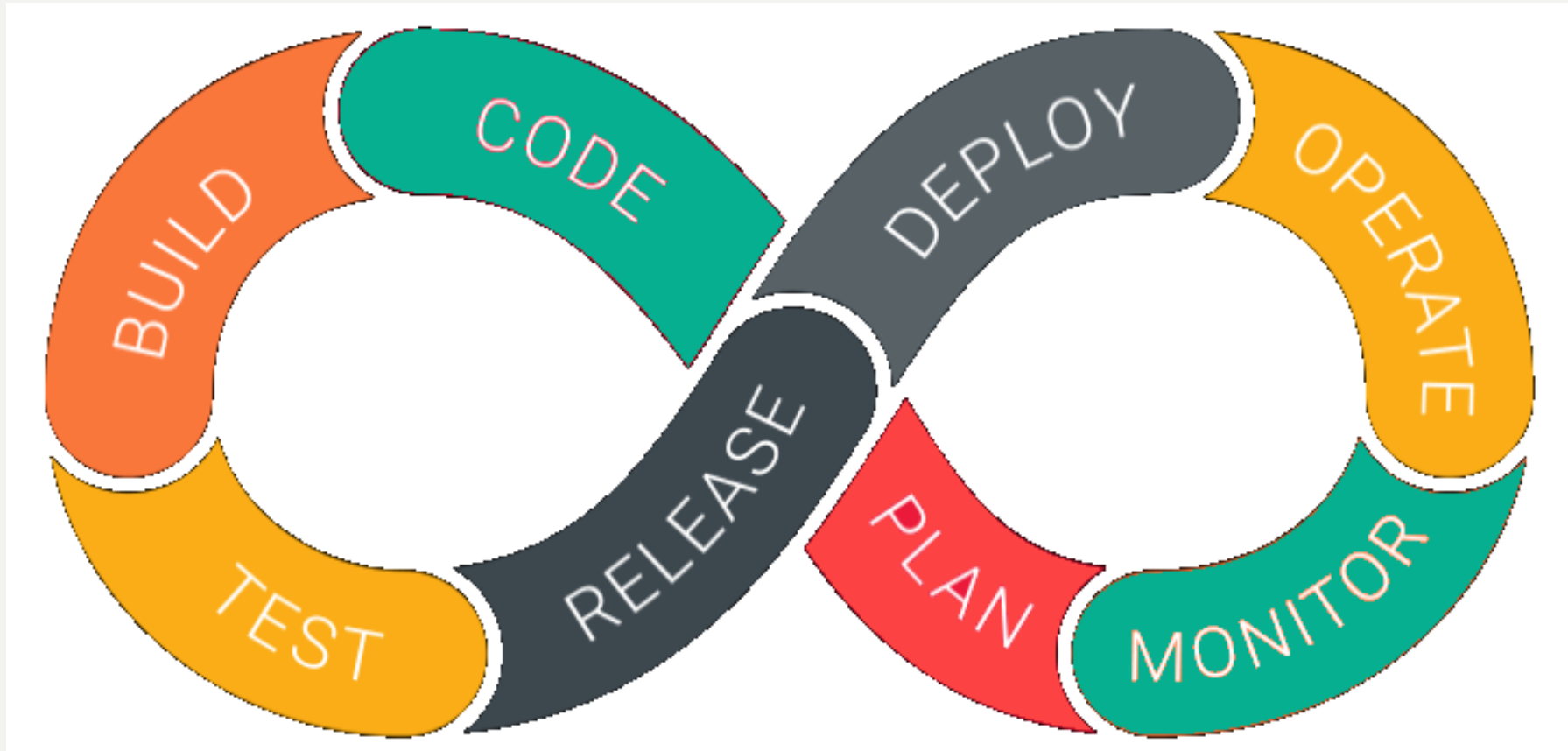
WHY DEVOPS?

- 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.
 - Team members are spending 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 their separate timelines and are not in synch causing further delays.

WHEN TO USE AND WHEN NOT TO USE?

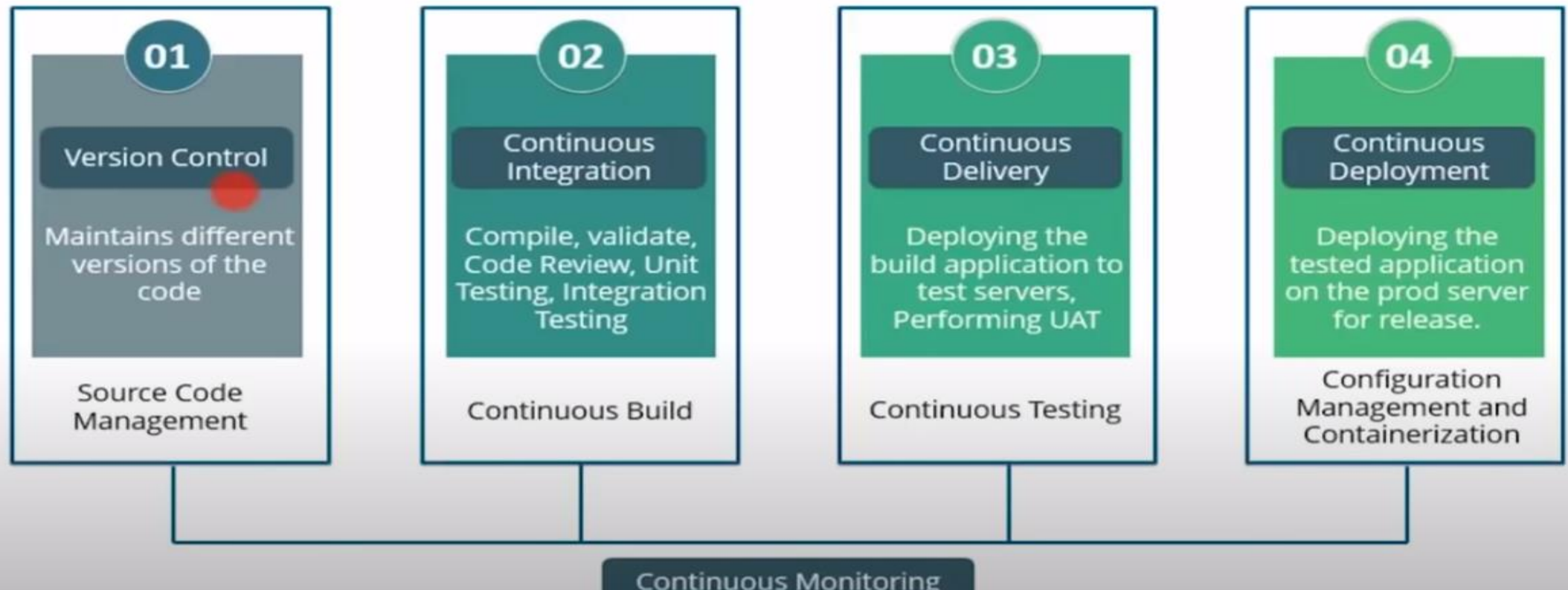
- Use
 - Large Distributed Applications like Ecommerce
 - Applications hosted on Cloud Platform
- NOT to Use
 - Mission Critical Applications like Bank, Power and other sensitive data sites.
 - These applications need:
 - Strict Access control on the production Environment
 - Detailed Change management policy
 - Access control policy to the data centres

DEVOPS LIFECYCLE



DEVOPS STAGES

DevOps Stages



DEVOPS PRINCIPLES

- Customer-Centric Action
- End-To-End Responsibility
- Continuous Improvement
- Automate Everything
- Work as one Team
- Monitor and Test Everything

AGILE METHODOLOGY

What is Agile Methodology?

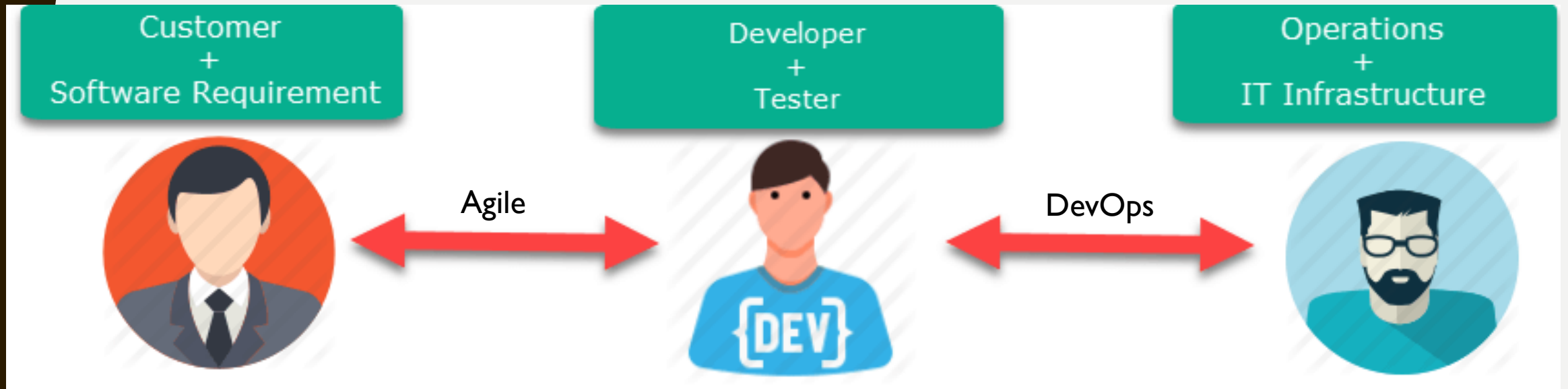
In the Agile Methodology each project is broken up into several 'Iterations'

All Iterations should be of the same time duration (between 2 to 8 weeks)

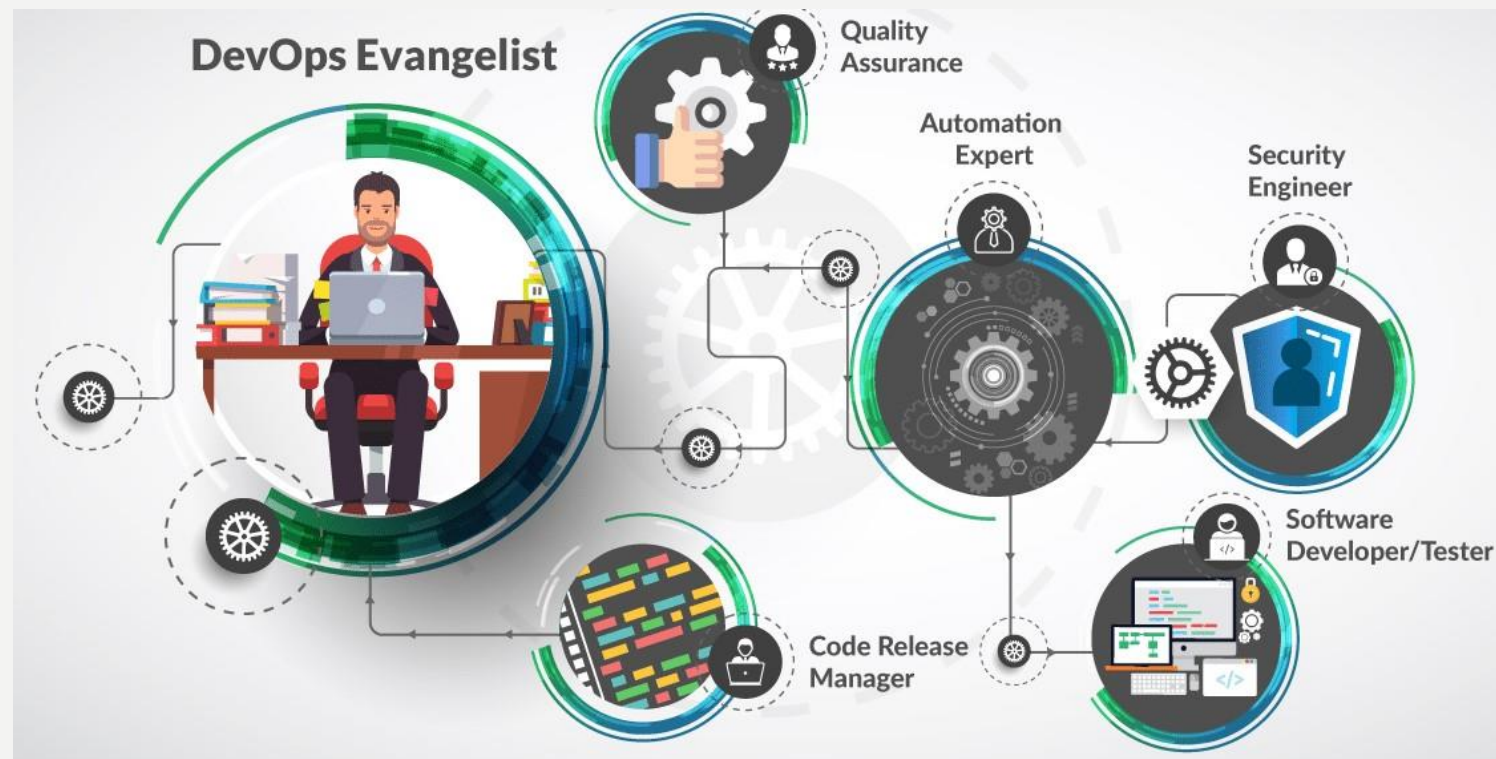
At the end of each iteration, a working product should be delivered



DEVOPS VS AGILE



DEVOPS ROLES AND RESPONSIBILITIES



DEVOPS AUTOMATION TOOLS

- Different categories of Automation:
 - Infrastructure Automation
 - AWS, Azure
 - Configuration Management
 - Chef, Puppet
 - Deployment Automation
 - Jenkins
 - Performance Management
 - App Dynamic
 - Log Management
 - Splunk
 - Monitoring.
 - Nagios

DEVOPS STAGES

