

System Analysis and Design -2 ***(IS-352)***

Lecture 4

Dr. Wael Abbas
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Contents

- **What is DevOps?**
- **Why DevOps?**
- **DevOps Overview**

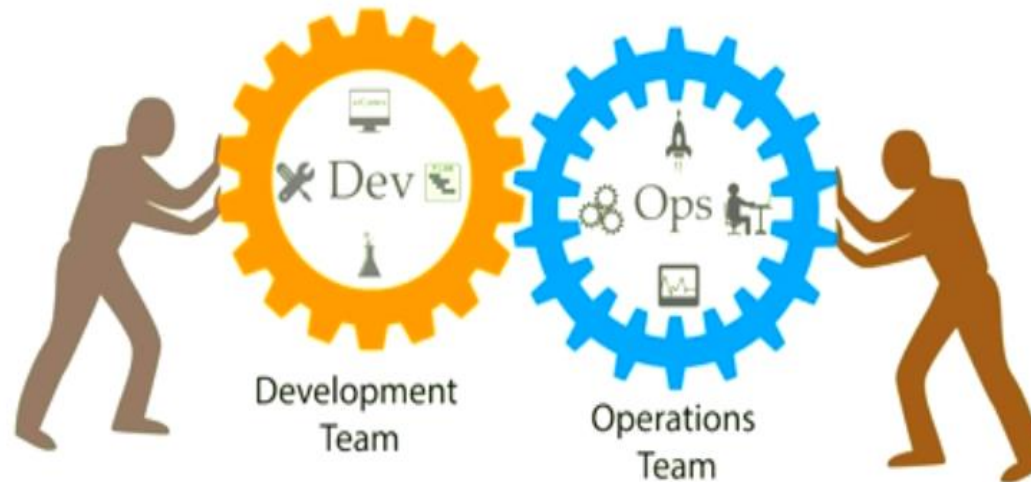
What is DevOps?

- Don't get scared with this term 'DevOps.'
- DevOps is nothing but the practice or methodology of making 'Developers' and the 'Operations' team work together.



What is DevOps?

- DevOps is a software development strategy which bridge the gap between the dev and the ops side of the company.



Why DevOps?

- Before DevOps came into the picture,
- **Waterfall Methodology** was used for software development. **But this methodology suffer from:**
 - At any stage, it is really difficult to go back and make changes
 - It is a risky process
 - Its main focus is to help internal teams work efficiently. It excludes end-users/clients
 - It imposes heavyweight processes like generation of unnecessary artefacts (typically documentation)

Why DevOps?

- Following Waterfall, there was a gap between customers' software requirements and the developers which was overcome by Agile



Gaps Between Customers and Developers

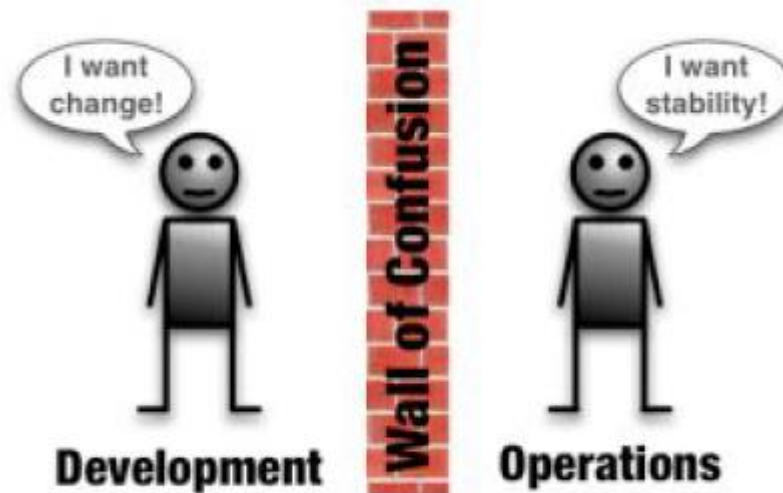
- Agile overcome these disadvantages and bridge the gap between Customers and Developers.

Why DevOps?

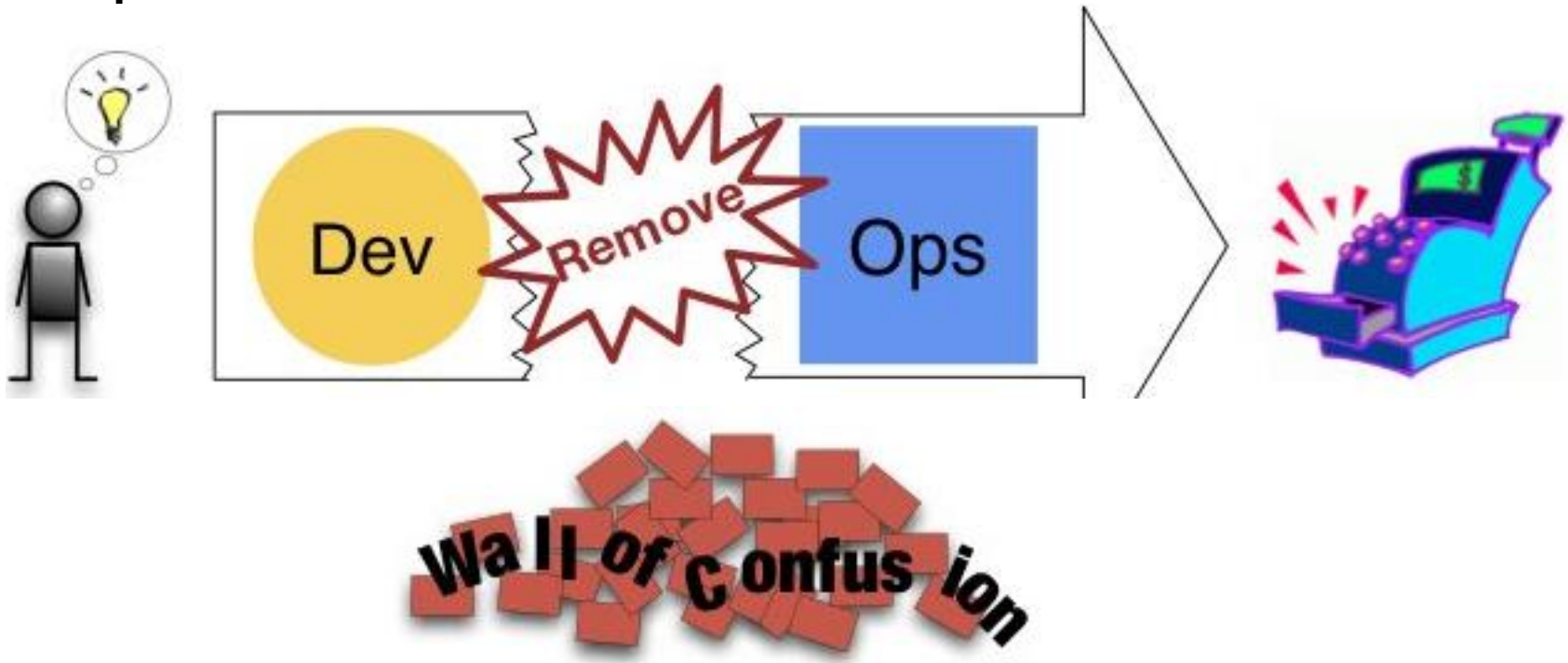
- Agile development practices involve iterative development, along with focusing on customer feedback, incorporating small rapid changes, and speeding up releases.
- **However**, the true value of the Agile (and in particular the practice of Continuous Integration and Delivery) has often been negated at the final push by traditional operational requirements.

Why DevOps?

- While Development (in order to meet changing Business needs) have been trying to put releases into Production more frequently by delivering incremental changes.
- Operations have been trying to reduce risk by slowing down the rate of change



- **DevOps** was introduced in order to overcome the gap between developers and the operations team.





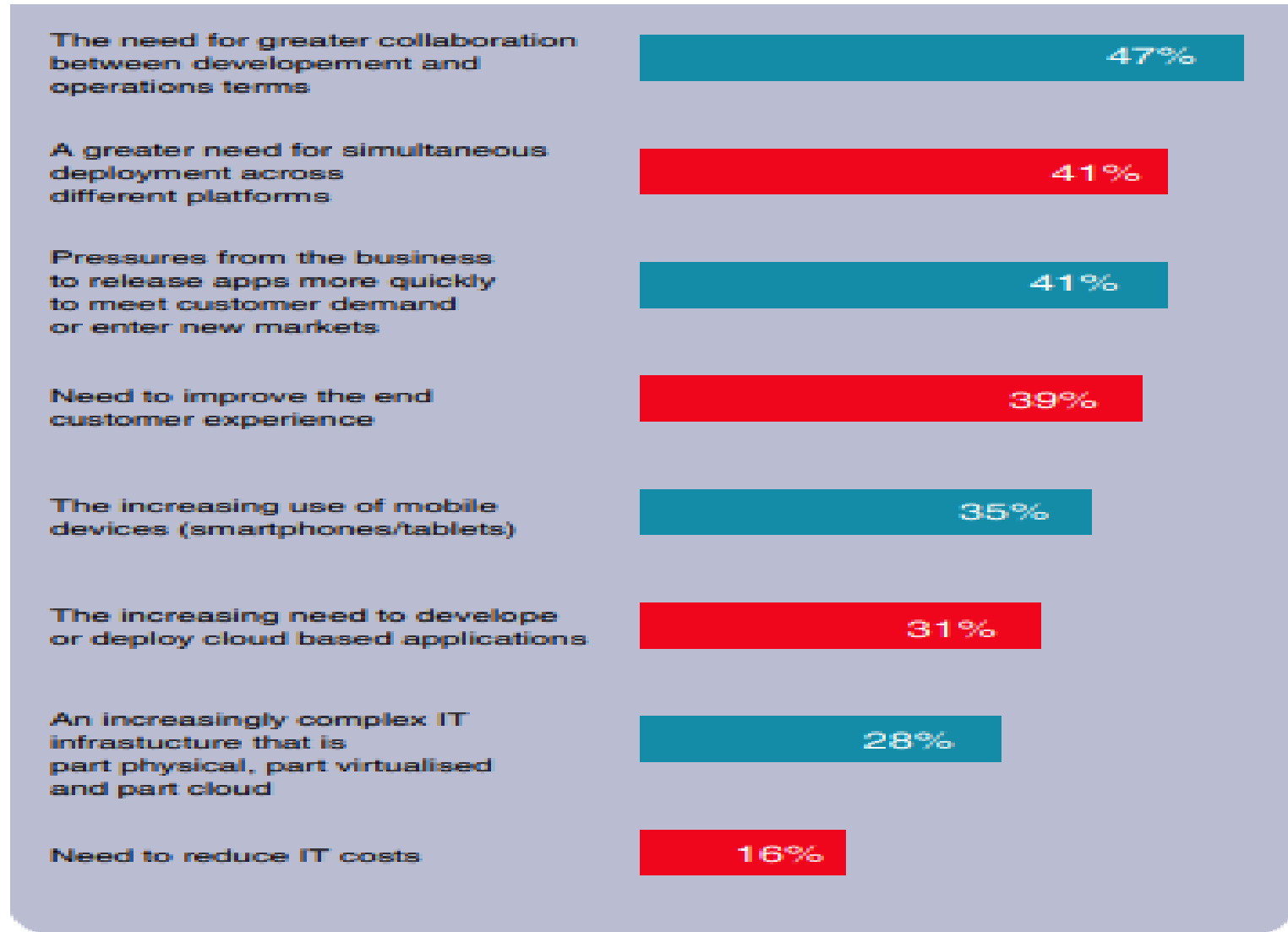
Agile addresses gaps in Customer and Developer communications



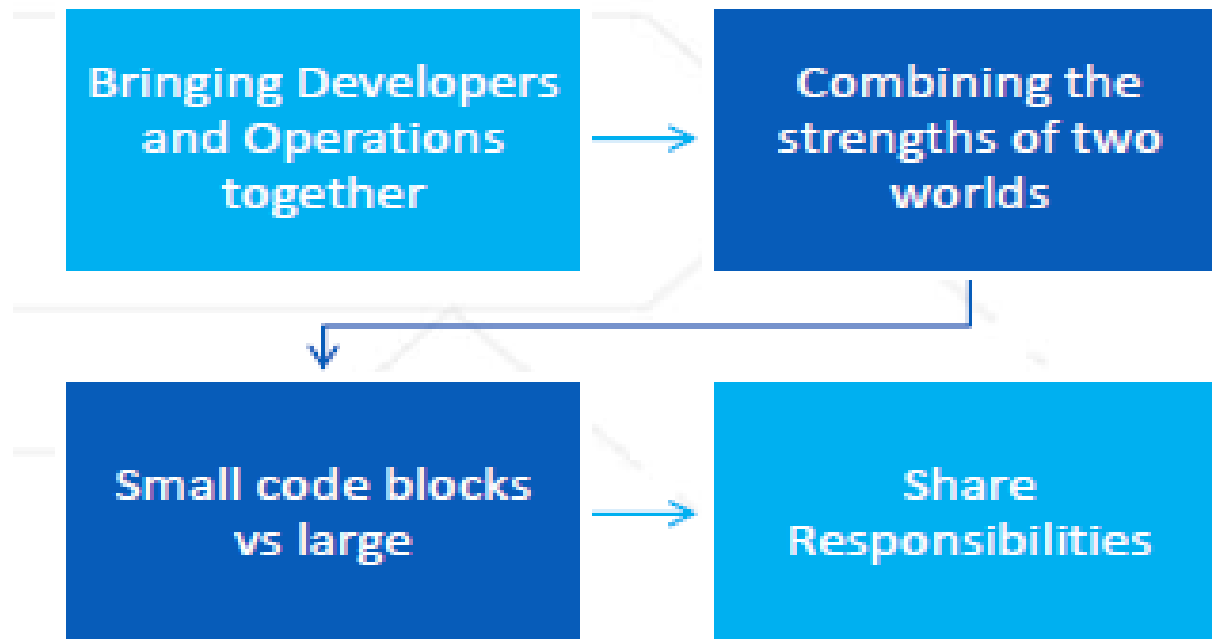
DevOps addresses gaps in Developer and IT Operations communications



What drives the need for Devops?



DevOps Overview



DevOps Overview

Integration of Develop and Operations into one team

One team has better communication and collaboration

Productivity is improved through automating testing code, infrastructure, workflows and anything else that can be automated

Continuously measuring application performance

How DevOps Works

Code is written in very small chunks vs large builds

Deployments happen in days/hrs vs weeks/months

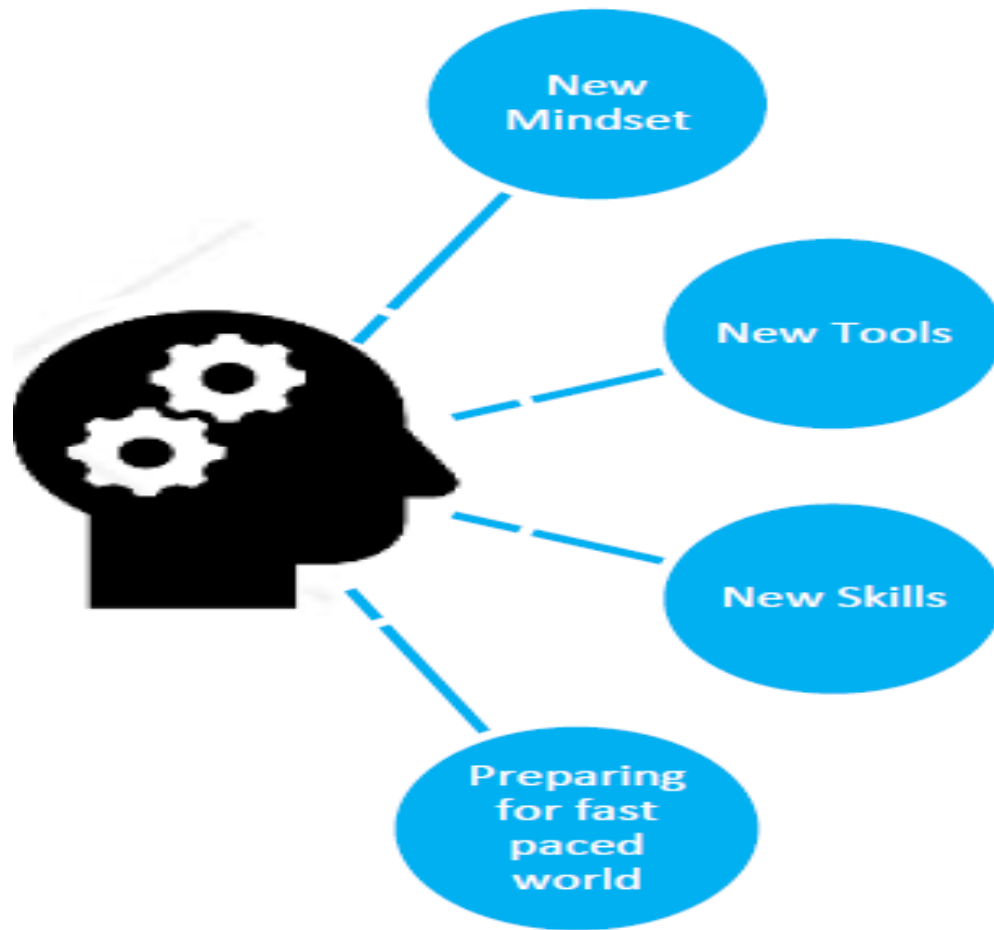
Development environment is identical to production

Rapid iteration improves speed to react to market needs

Developing Configuration Management Code to build Infrastructure at Scale

Realtime Application Performance Monitoring to know the impact each code change makes

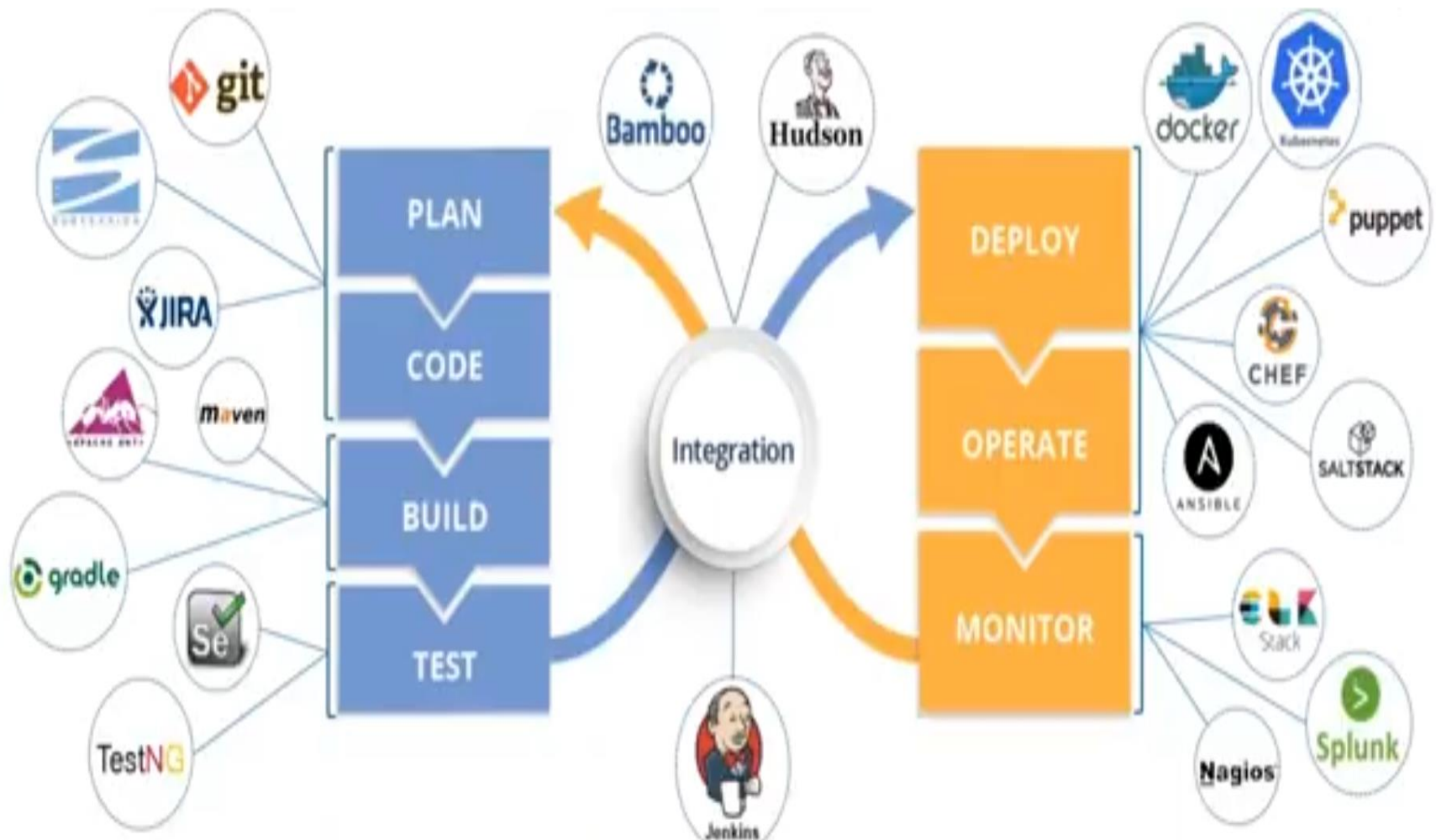
What does this all mean?

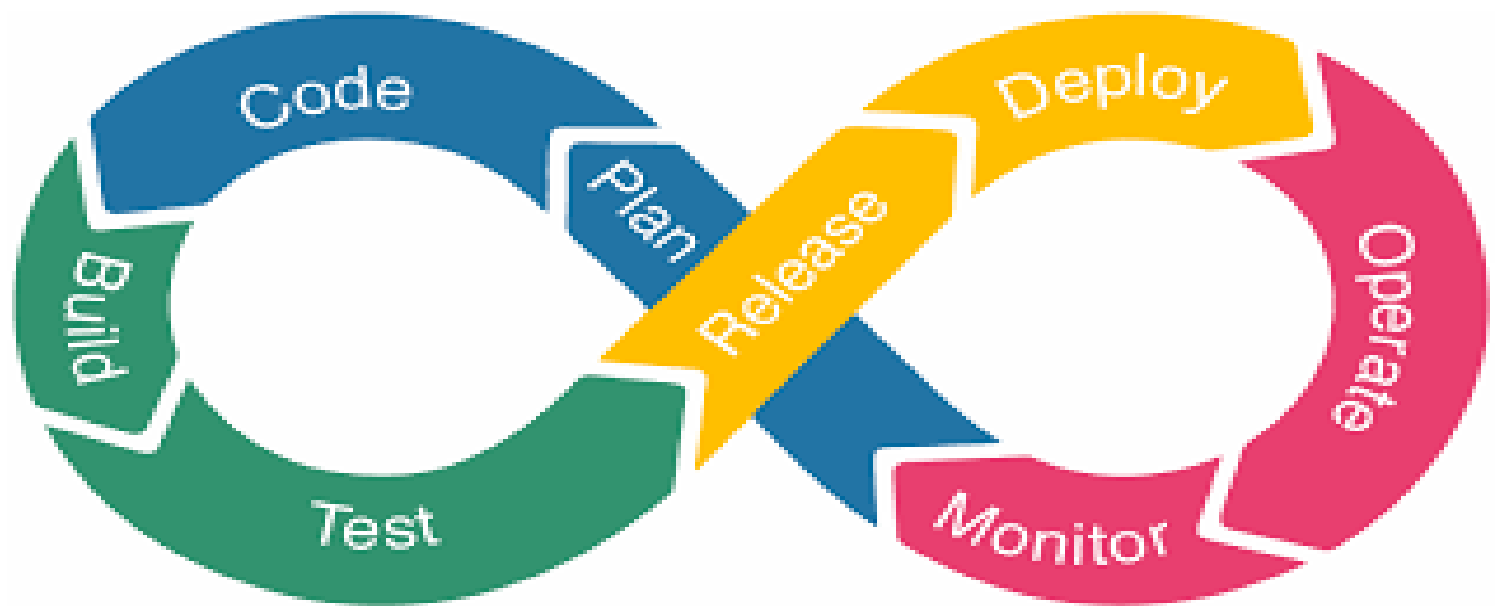


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- How exactly does DevOps work?
 - **DevOps Lifecycle**
 - **DevOps Lifecycle Stages**
- **DevOps Benefits**

DevOps Lifecycle





Thank You