

UECS2363 SOFTWARE CONSTRUCTION AND CONFIGURATION

CHAPTER 2 : Introduction to DevOps

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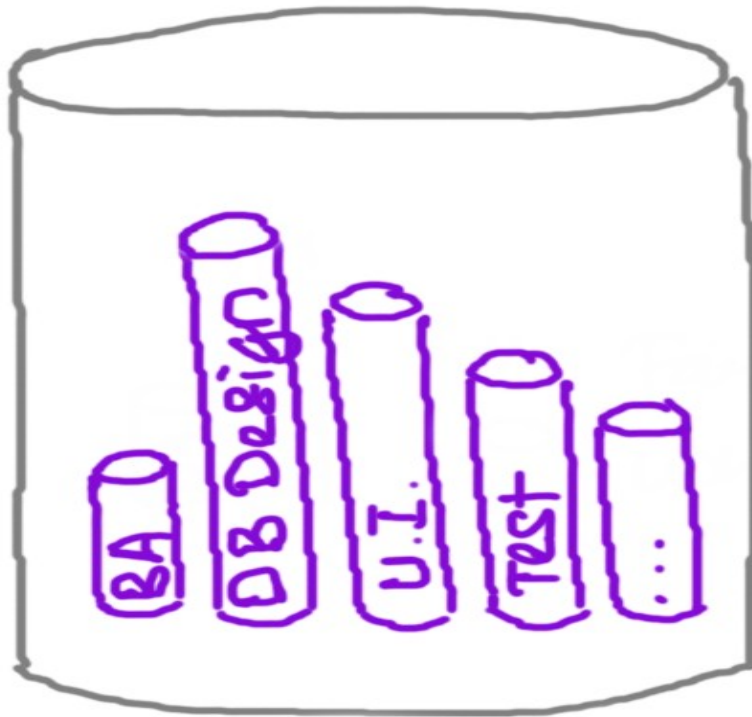
Software Project Phases

- **Inception:**
 - The vision of the system is developed, a project scope is defined, and the business case is justified.
- **Elaboration:**
 - Requirements are gathered and defined, risk factors are identified, and a system architecture is initialized.

Software Project Phases

- **Construction:**
 - The software is constructed, programmed, and tested.
- **Transition:**
 - The software is delivered to the user.
- **Operations:**
 - The software is available to the user and is maintained by the operations team.

Dev vs Ops



Development



Operations

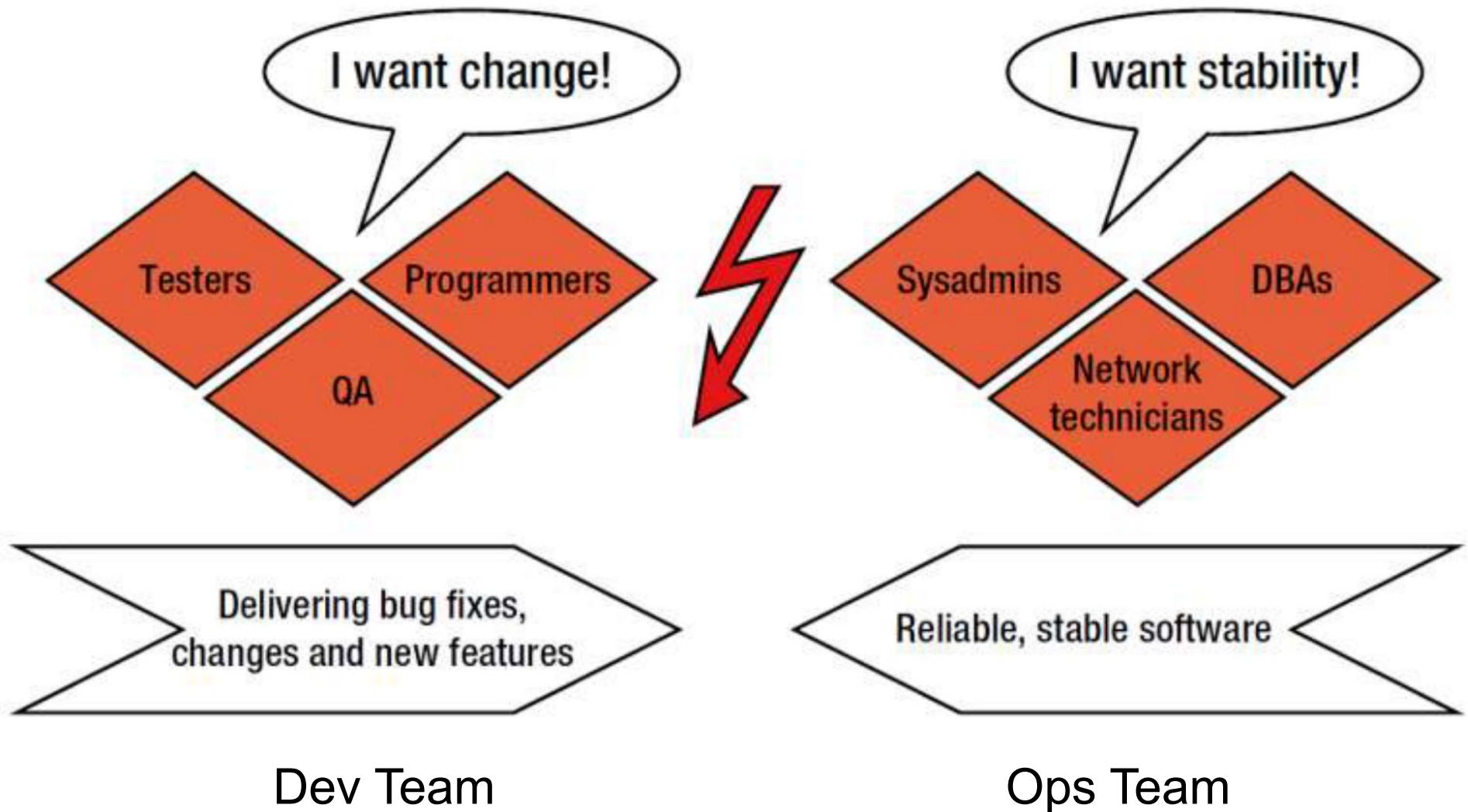
Conflict: Dev and Ops Team

- Dev Team: **Need for change**
 - Development produces changes,
 - e.g.: new features
 - bug fixes
 - work based on change requests, etc. They want their changes rolled out to production.

Conflict: Dev and Ops Team

- Ops Team: **Fear of change**
 - Once the software is delivered, the operations department wants to avoid making changes to the software to ensure stable conditions for the production systems.

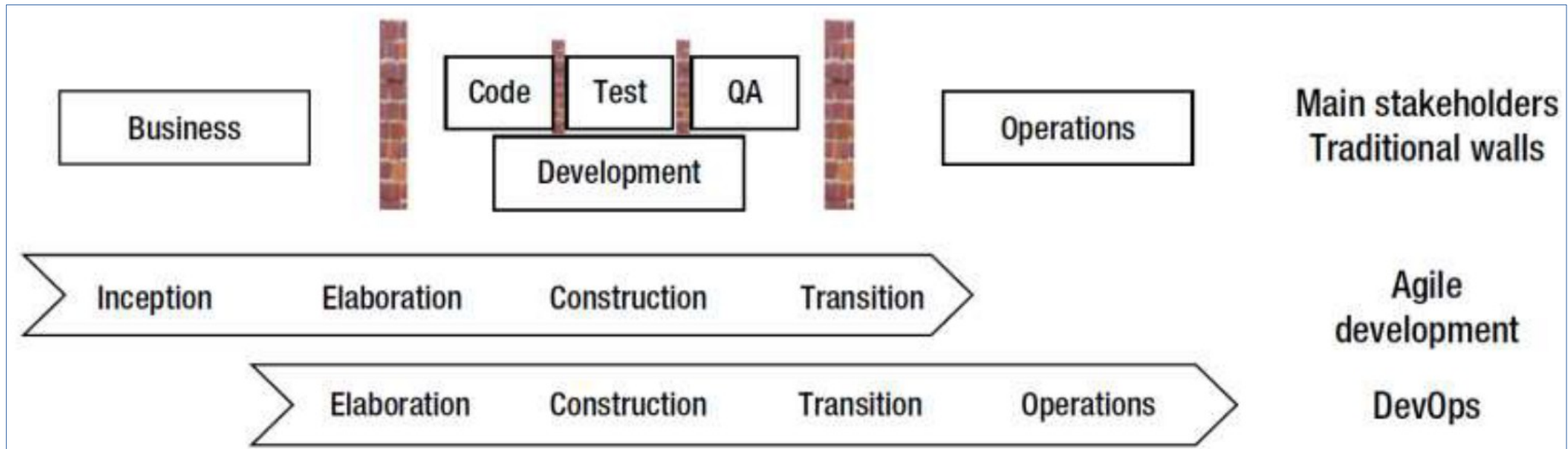
Conflict: Dev and Ops Team



DevOps

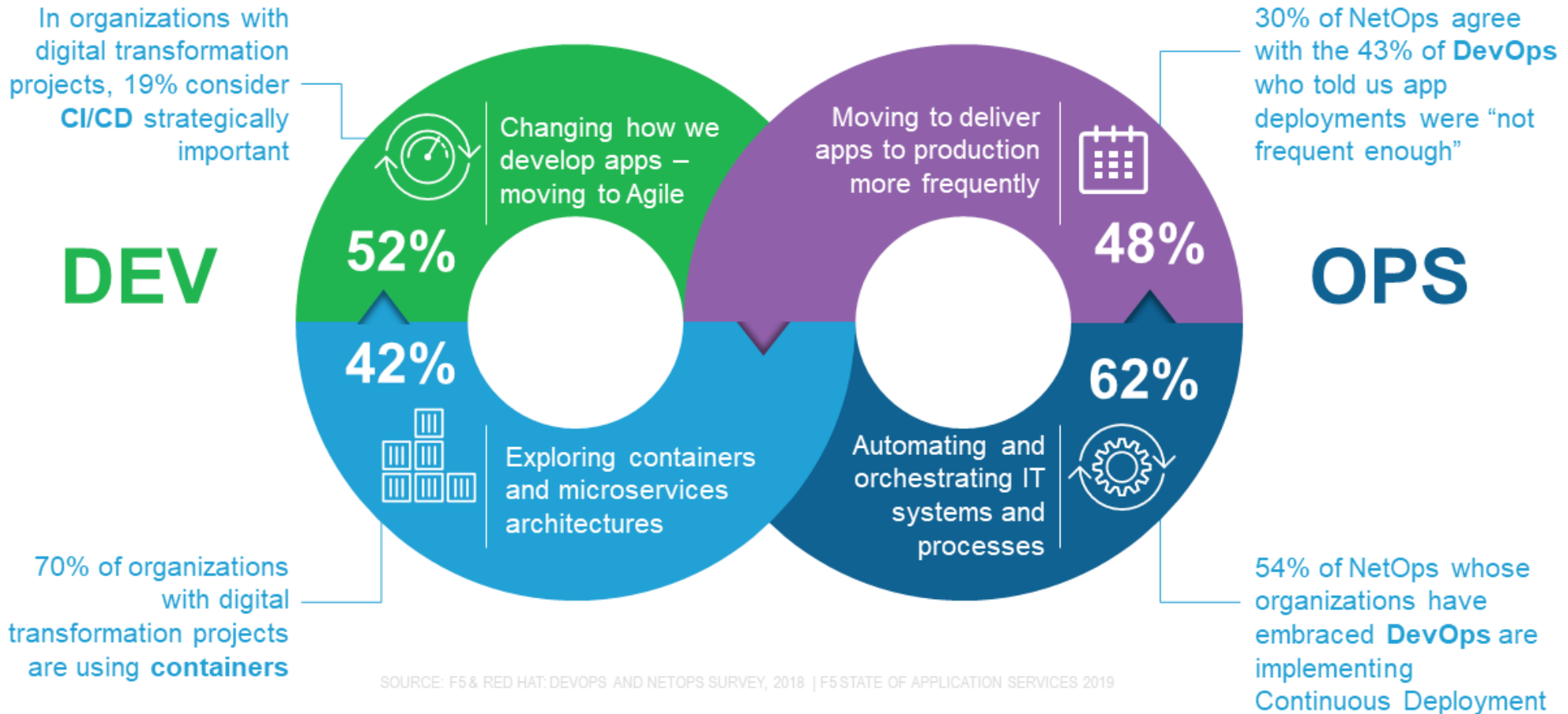
- A mix of patterns intended to **improve collaboration** between development and operations.
- Addresses **shared** goals and incentives as well as shared processes and tools.
- Respects specific cultures, that **people** are more important than **processes**, which, in turn, are more important than **tools**.
- Accepts the inevitability of conflicts between development and operations

Agile vs DevOps



DevOps Illustrated

DIGITAL TRANSFORMATION MEANS DEVOPS

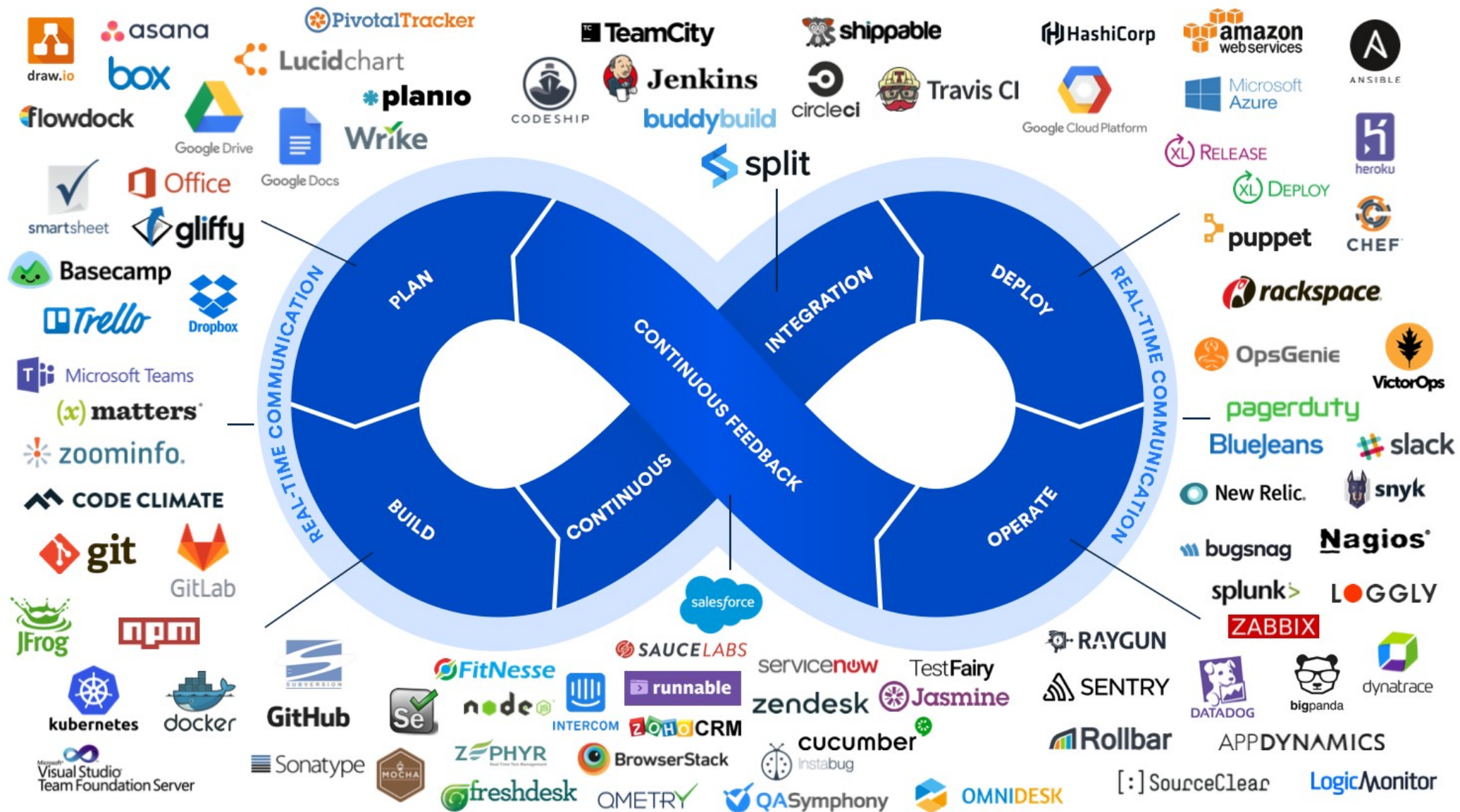


Source: F5 & REDHAT DevOps and NetOps Survey 2018 | F5 State of Application Services 2019

DevOps Tools

- **Code and scripts for:**
 - **Building the application.**
 - **Unit testing the application.**
 - **Acceptance testing the application.**
 - **Deploying the application.**
 - **Configuring the application for different target environments.**
 - **Programming the attributes and “behavior” of the target environment.**

DevOps Tools Illustrated



Source: OSOLABS post on 28 Sept 2019 osolabs.com/blog/devops-tools-of-the-trade

END OF LECTURE 03