Introduction to DevOps

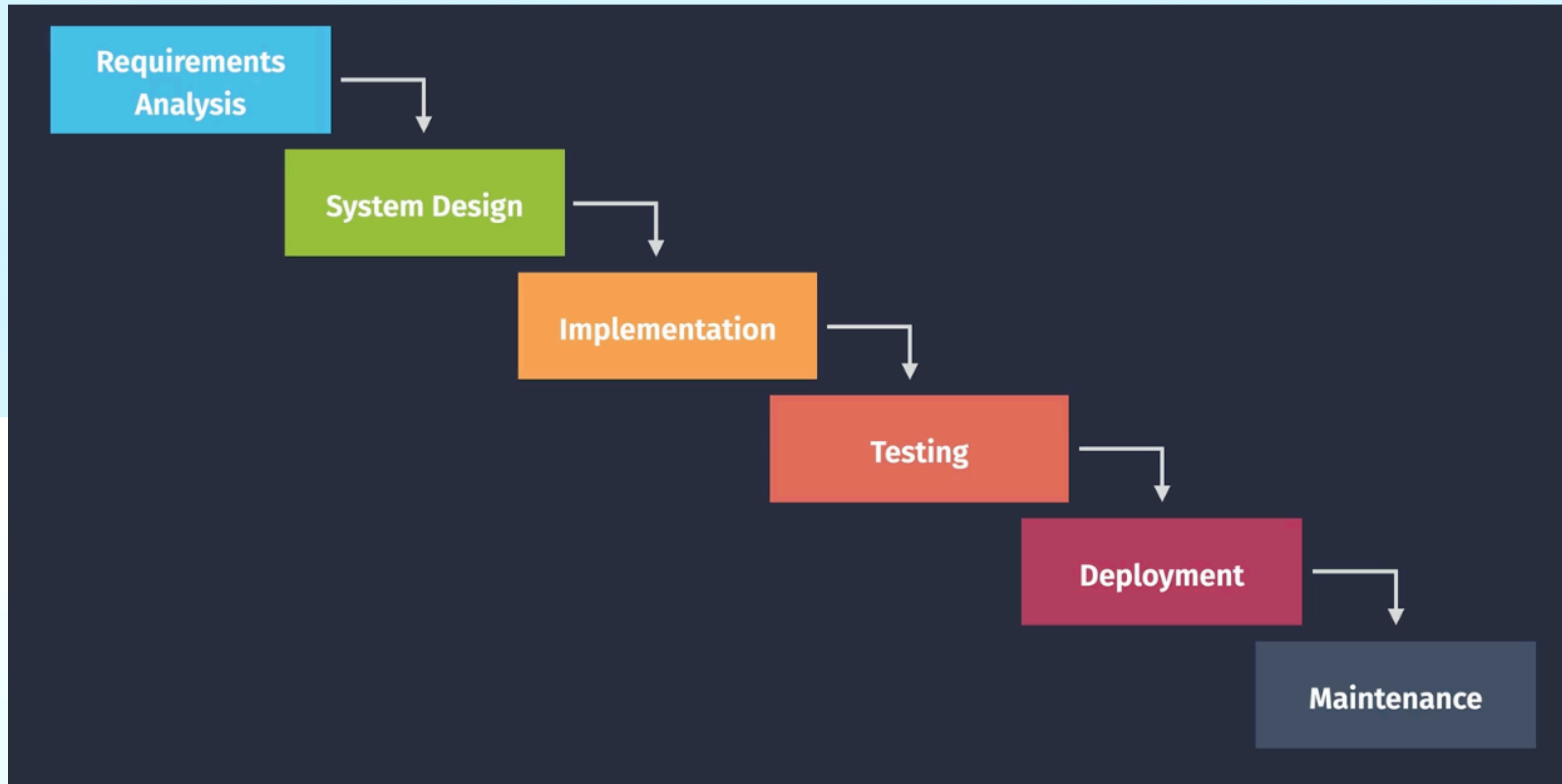**Agenda:**

WaterFall
Agile
Challenges with existing Tech Teams
Introduction to DevOps Teams
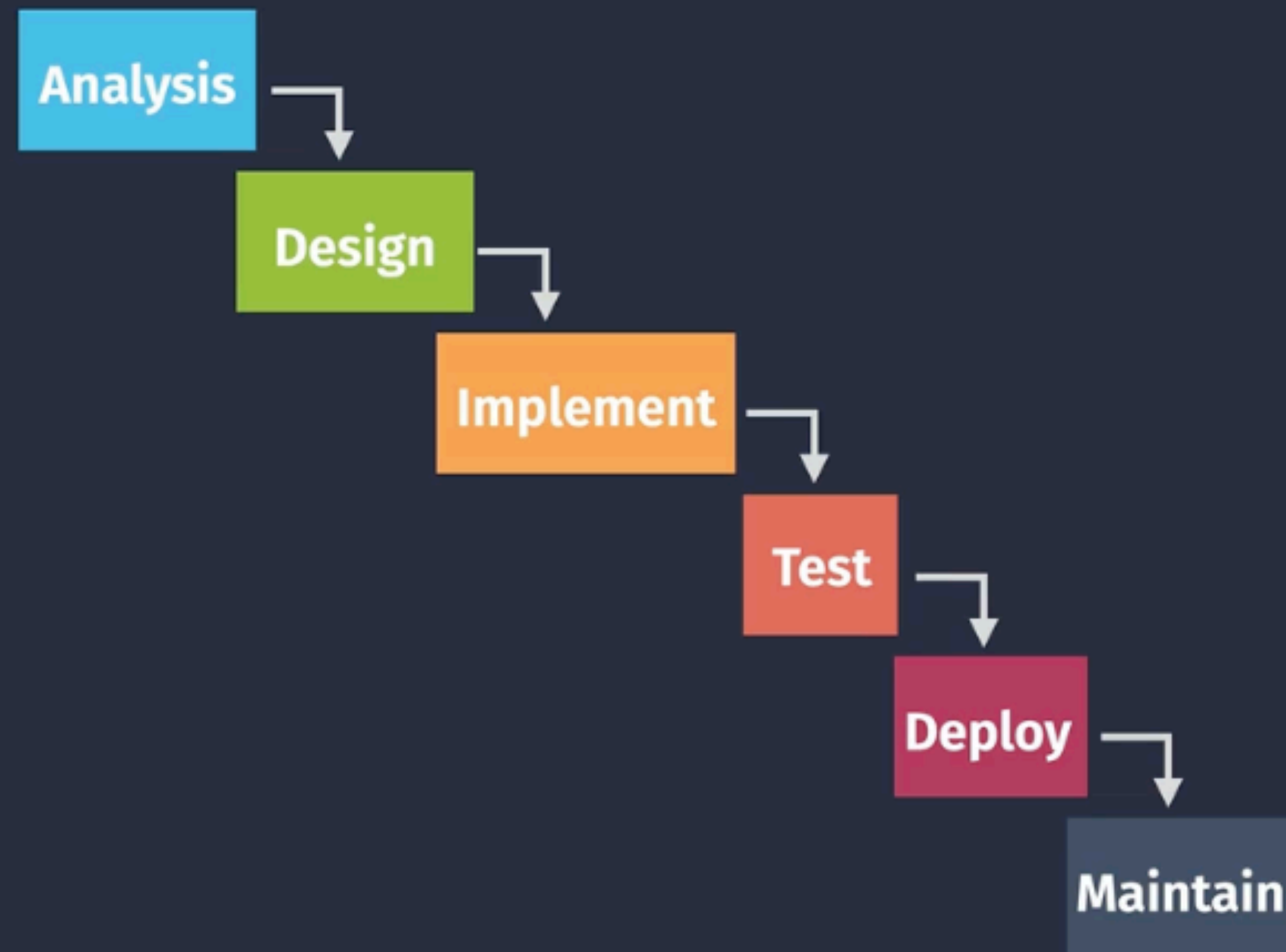
Waterfall

Challenges:

- Long time Delivery
- Limited customer involvement
- Design is difficult to change
- Disagreements over scope
- Misaligned Exceptions
- Lack of transparency

Agile

Practices

Capture User Stories

Visualize Work Tasks (Boards)

Time-Box Work (into Sprints)

Integrate Feedback and Data

Frameworks

Scrum   Kanban   SAFe

Values

Individuals and Interactions

Working Software

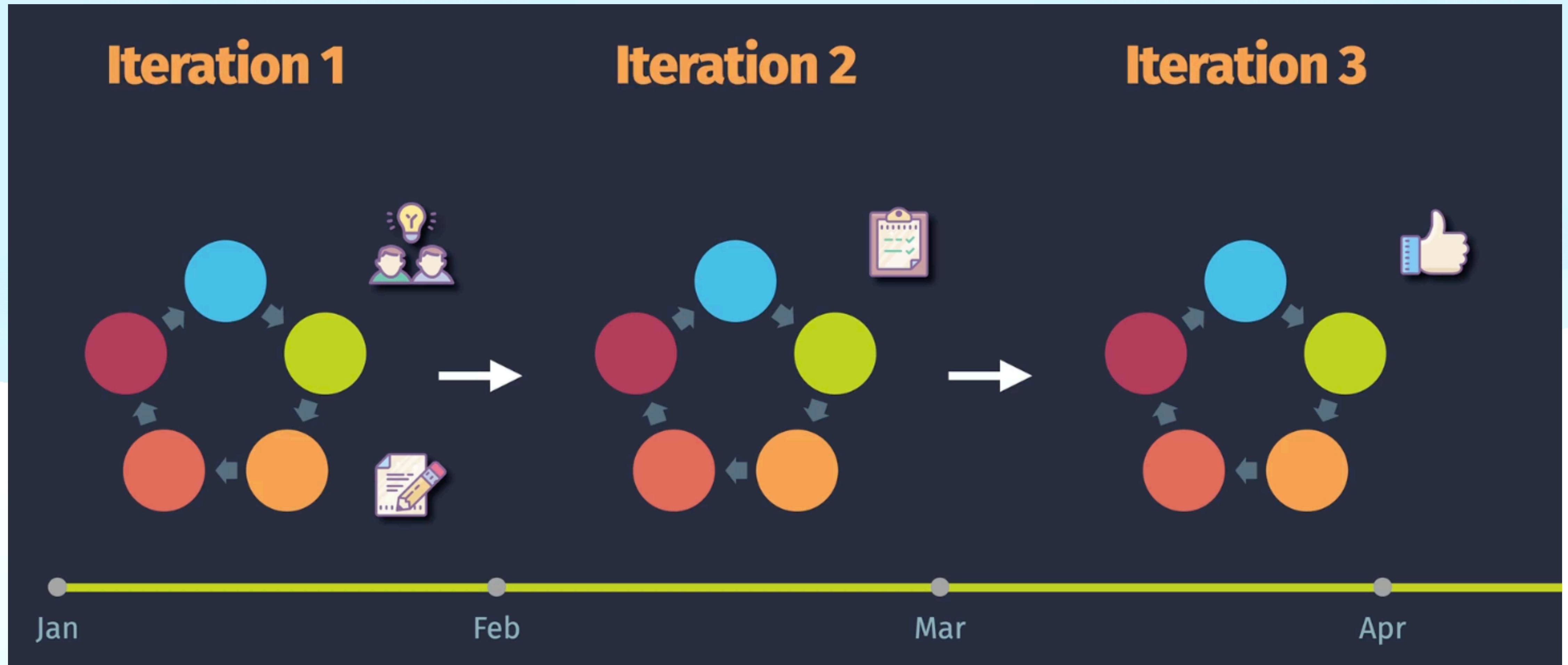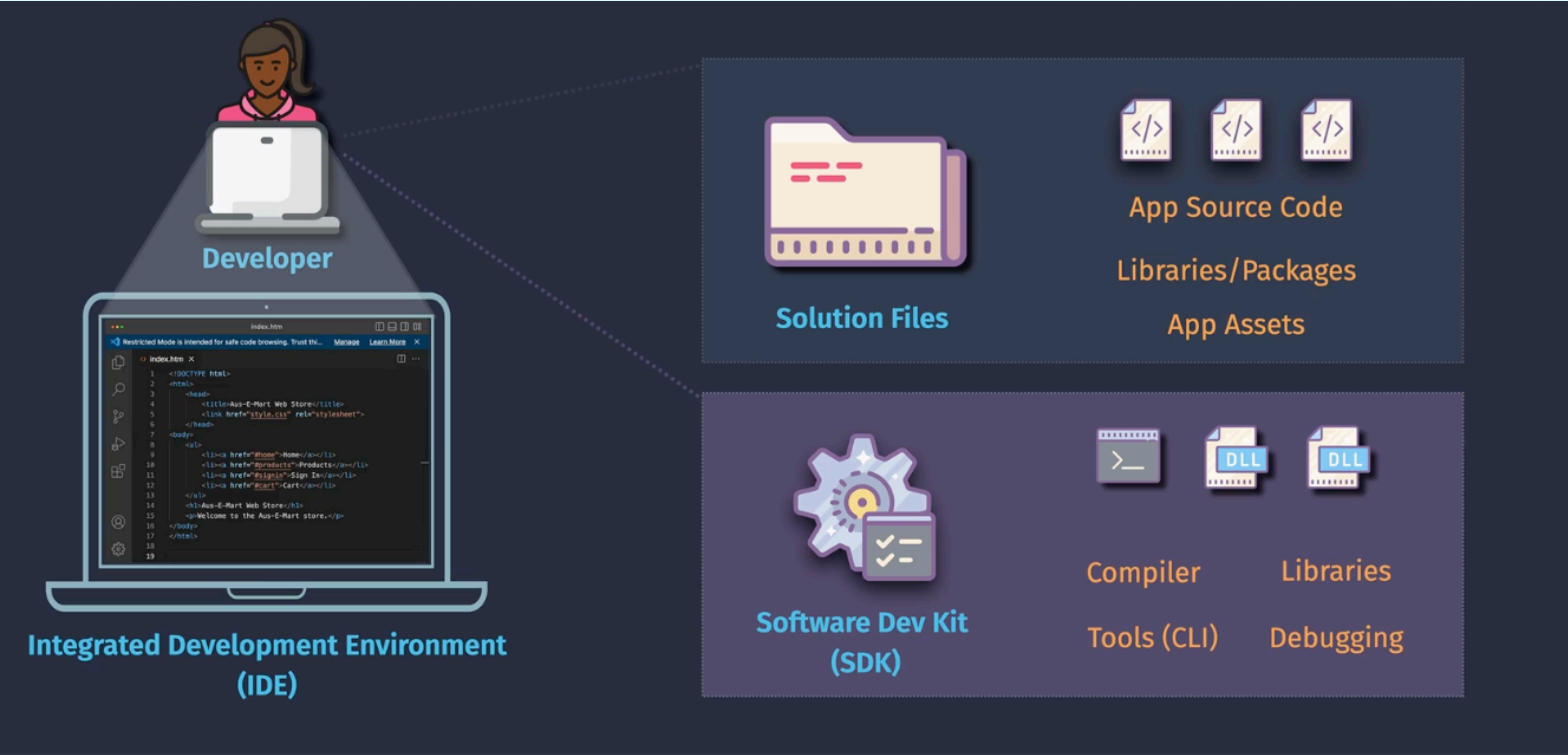Customer Collaboration

Responding to Change

Agile vs Waterfall

Agile vs Waterfall

What Development Involves:

- Develop
- Build
- Deploy

Developing the app

Developer

Integrated Development Environment
(IDE)

Solution Files

App Source Code

Libraries/Packages

App Assets

Software Dev Kit
(SDK)

Compiler   Libraries
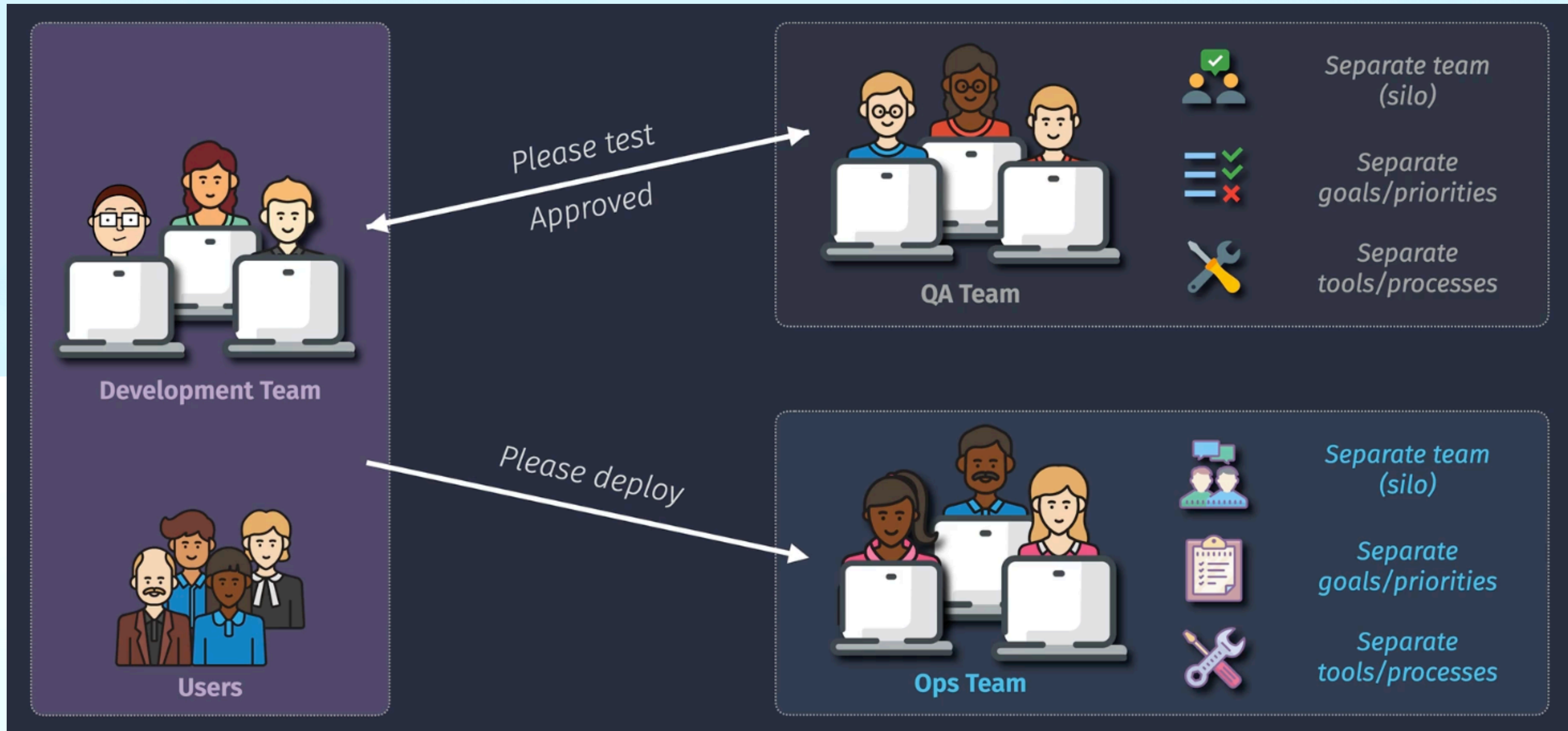
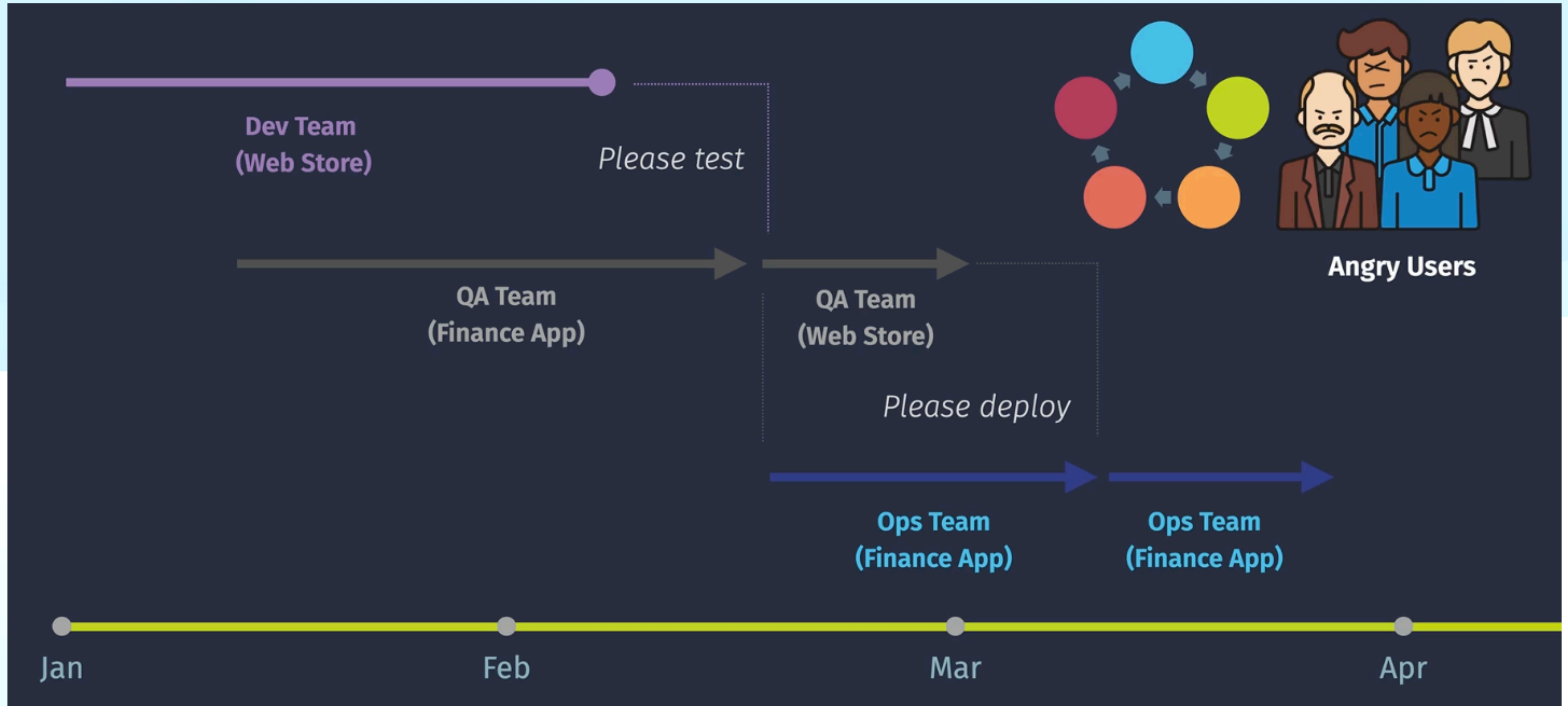Tools (CLI)   Debugging
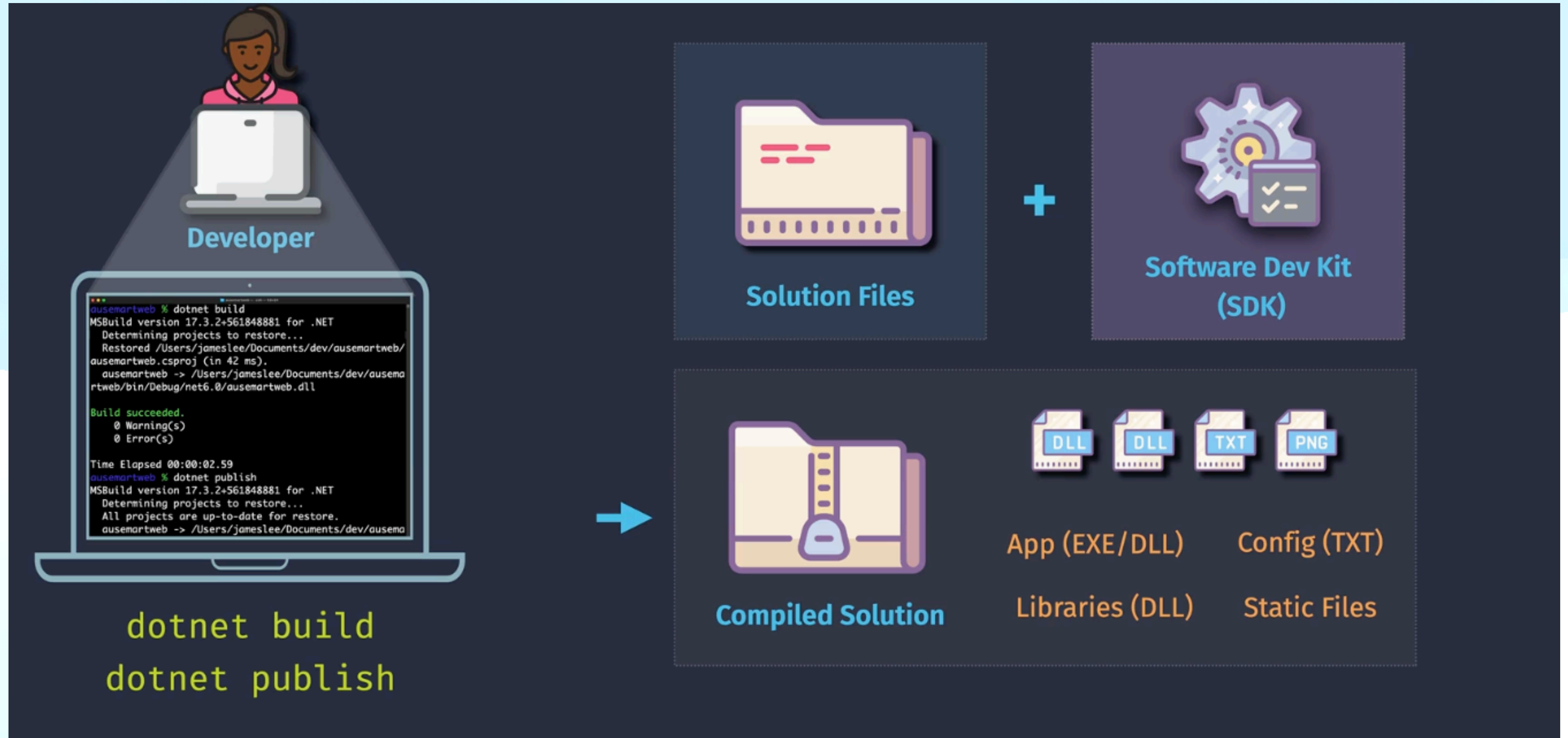
Building the app

Deploying the app

- Deploying app involves creating infrastructure by Ops Team.
- Ops team will schedule the date to deploy the new version of the application on the infra.
- Sometimes deploying app involves adding additional teams such as QA and Performance teams.

Traditional Team Structure
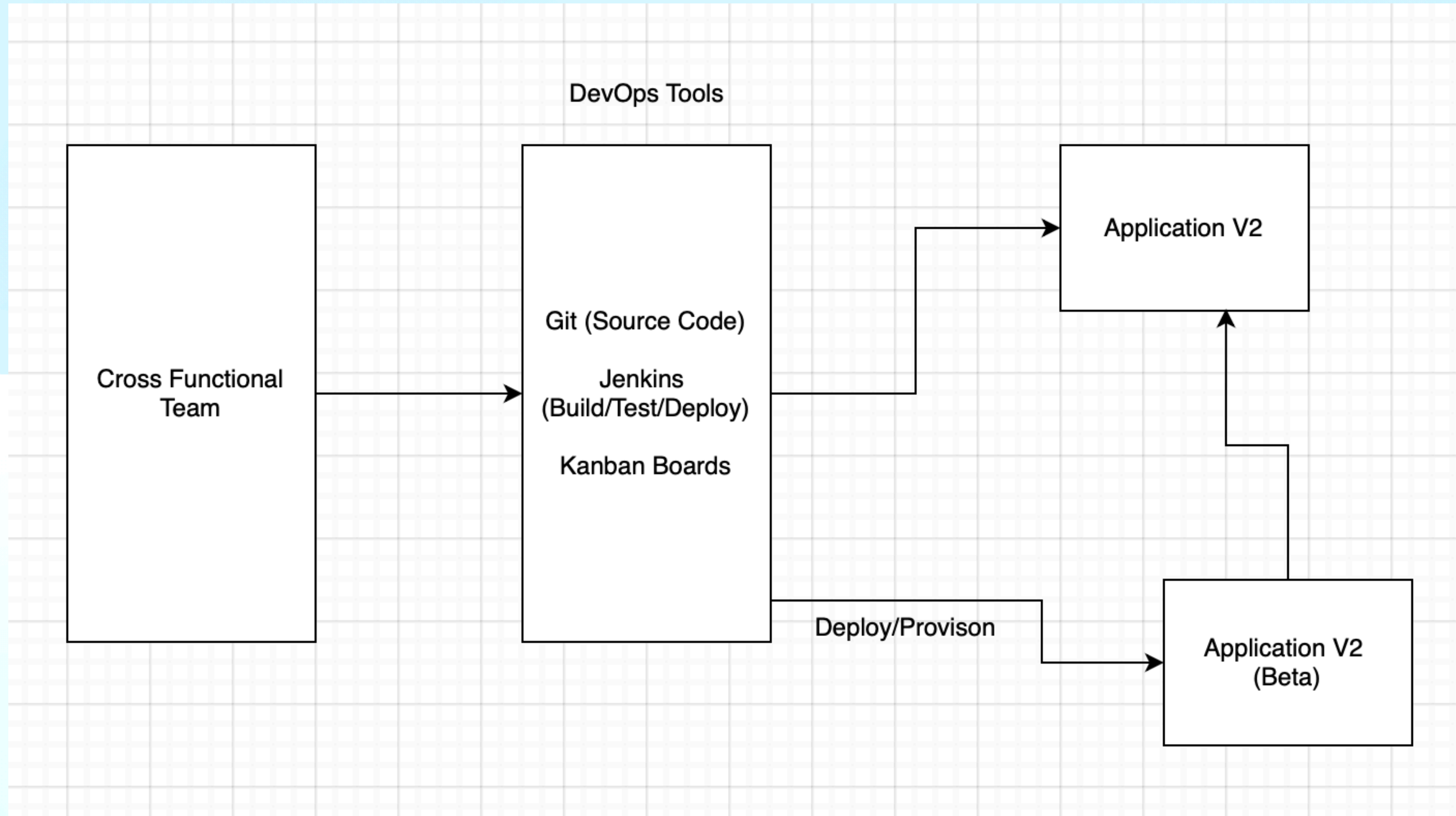

Development Team

Users

Please test
Approved

Please deploy

QA Team

- Separate team (silo)
- Separate goals/priorities
- Separate tools/processes

Ops Team

- Separate team (silo)
- Separate goals/priorities
- Separate tools/processes

Traditional Team Structure

Dev Team
(Web Store)

Please test

QA Team
(Finance App)

QA Team
(Web Store)

Please deploy

Ops Team
(Finance App)

Ops Team
(Finance App)

Angry Users

Jan   Feb   Mar   Apr

DevOps Team App deployment

Solution

ISSUES	SYMPTOMS	SOLUTION
Isolated Teams		∞ DevOps ∞
Negative Culture (us vs them)	Delayed/Slow Releases	Culture of collaboration
Competing Priorities	Low Quality Solutions	Experiment and improve
Inconsistent Environments	Inefficient Processes	Automate all the things
Lots of Manual Processes		
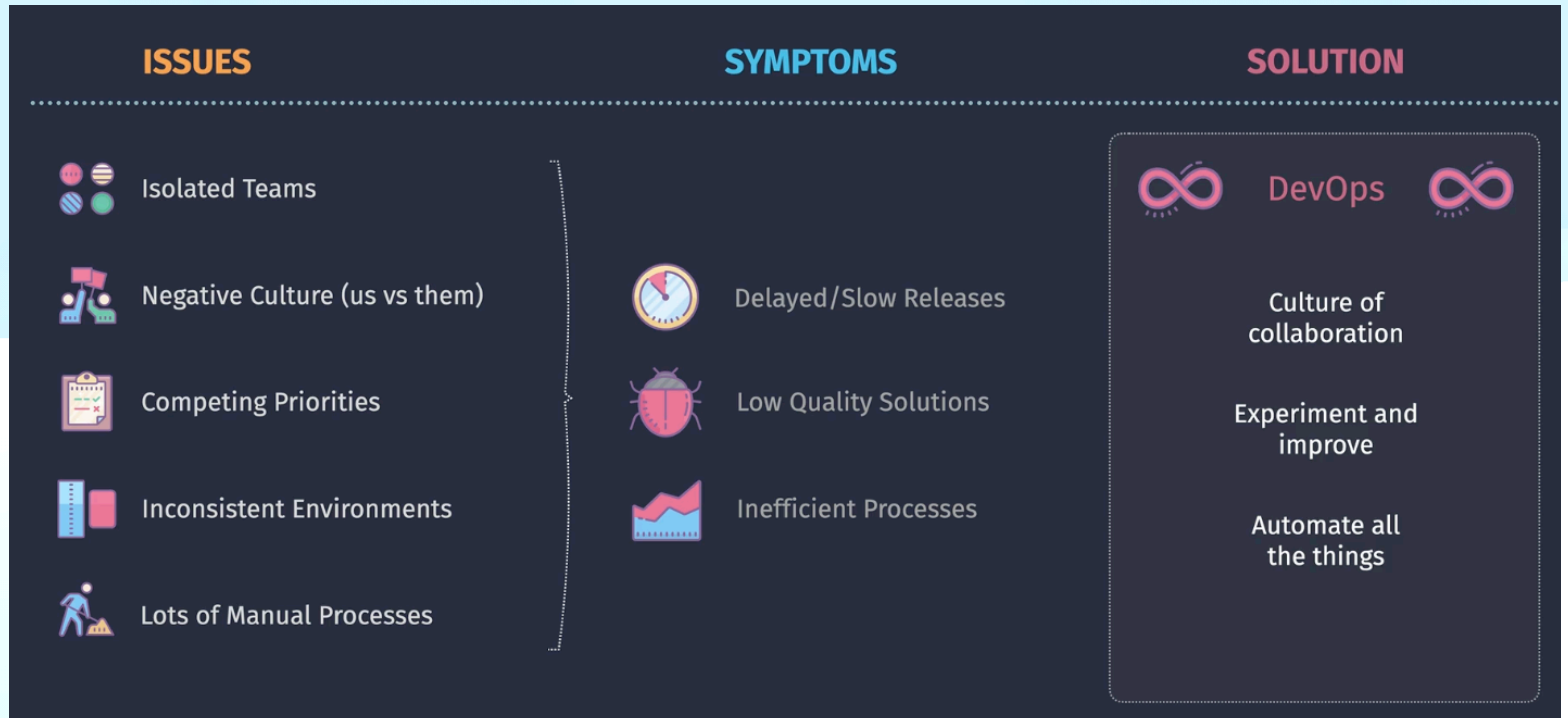
DevOps Infinite Loop Cycle
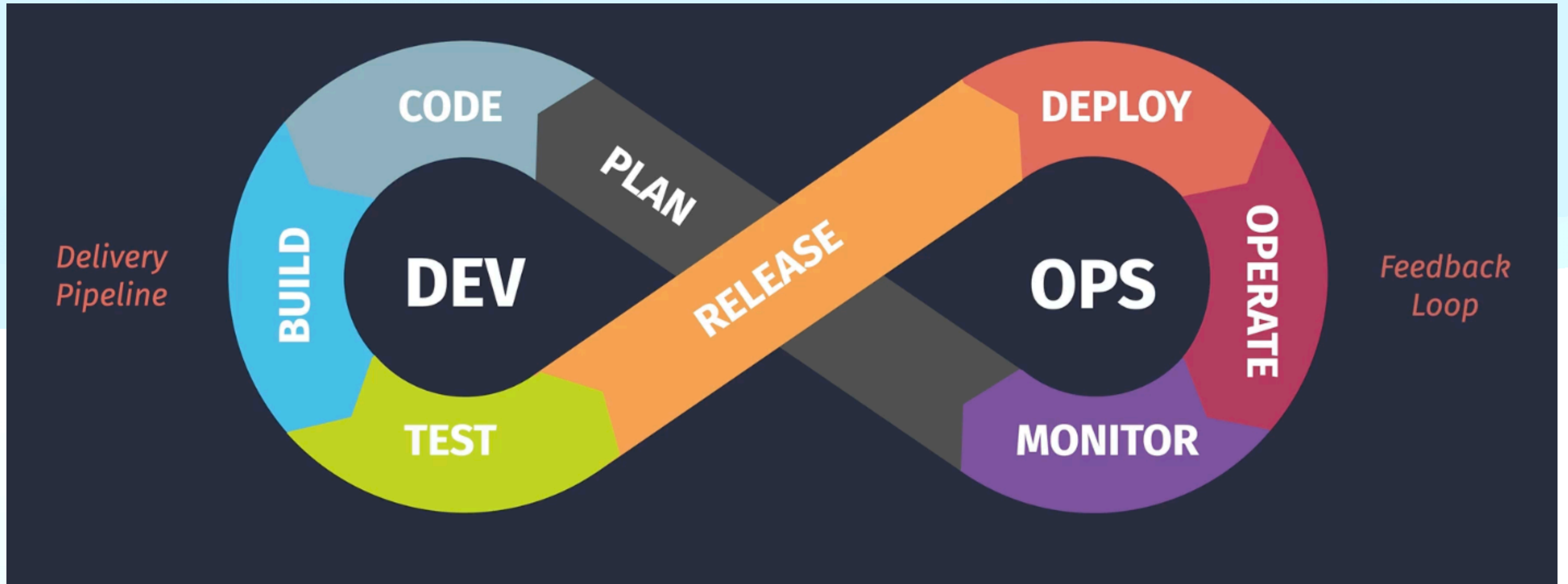
DevOps is not restricted
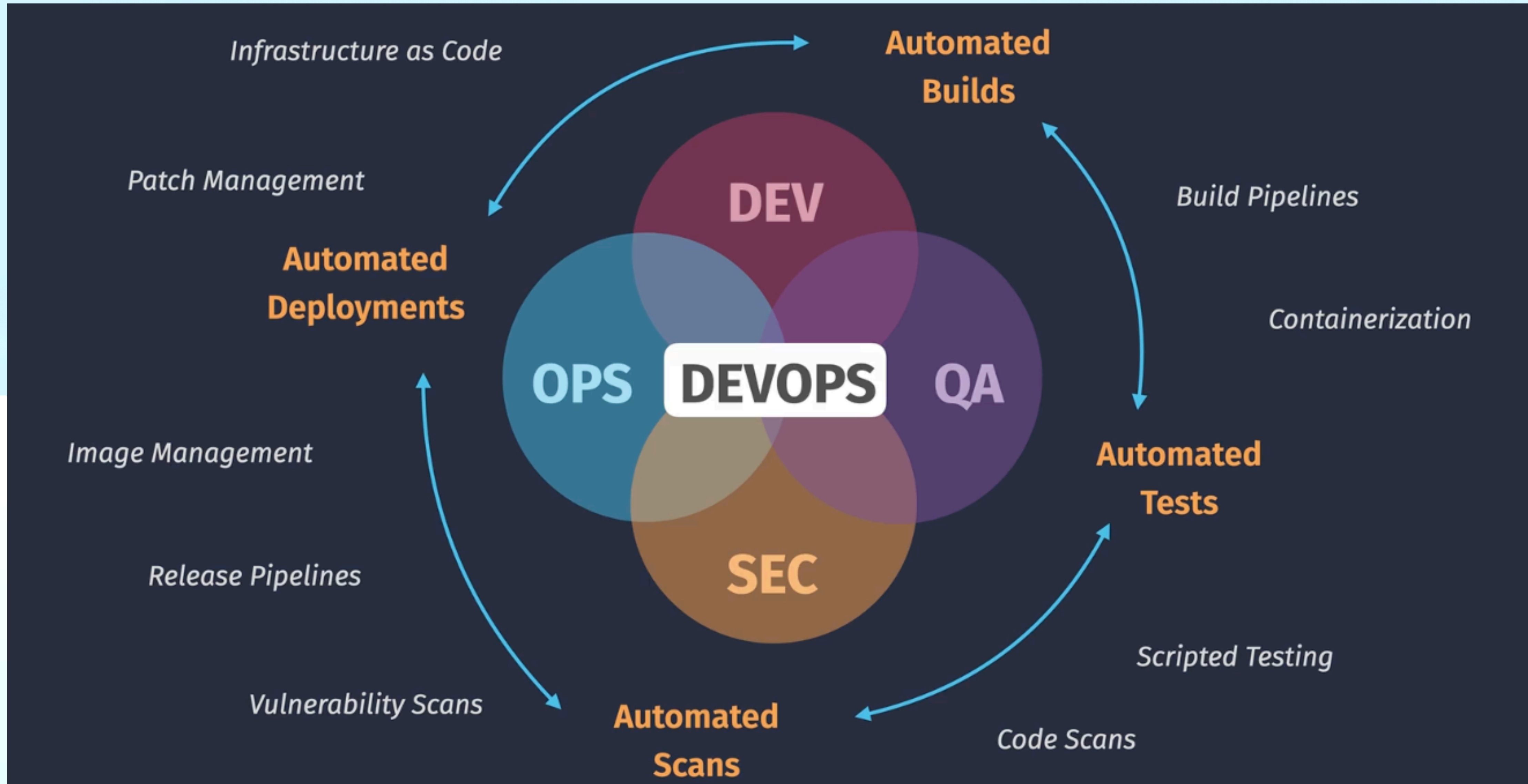
	Before	After
Deployment Frequency	Every 3 months	Daily
Deployment Time	Days	Minutes
Failure Rate	High	Low
Time to Detect	Hours or Days	Minutes or Seconds
Time to Recover	Hours or Days	Minutes or Seconds