IMPORTANCE OF CI/CD PIPELINES

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1- WHAT IS THE CI/CD PIPELINES?
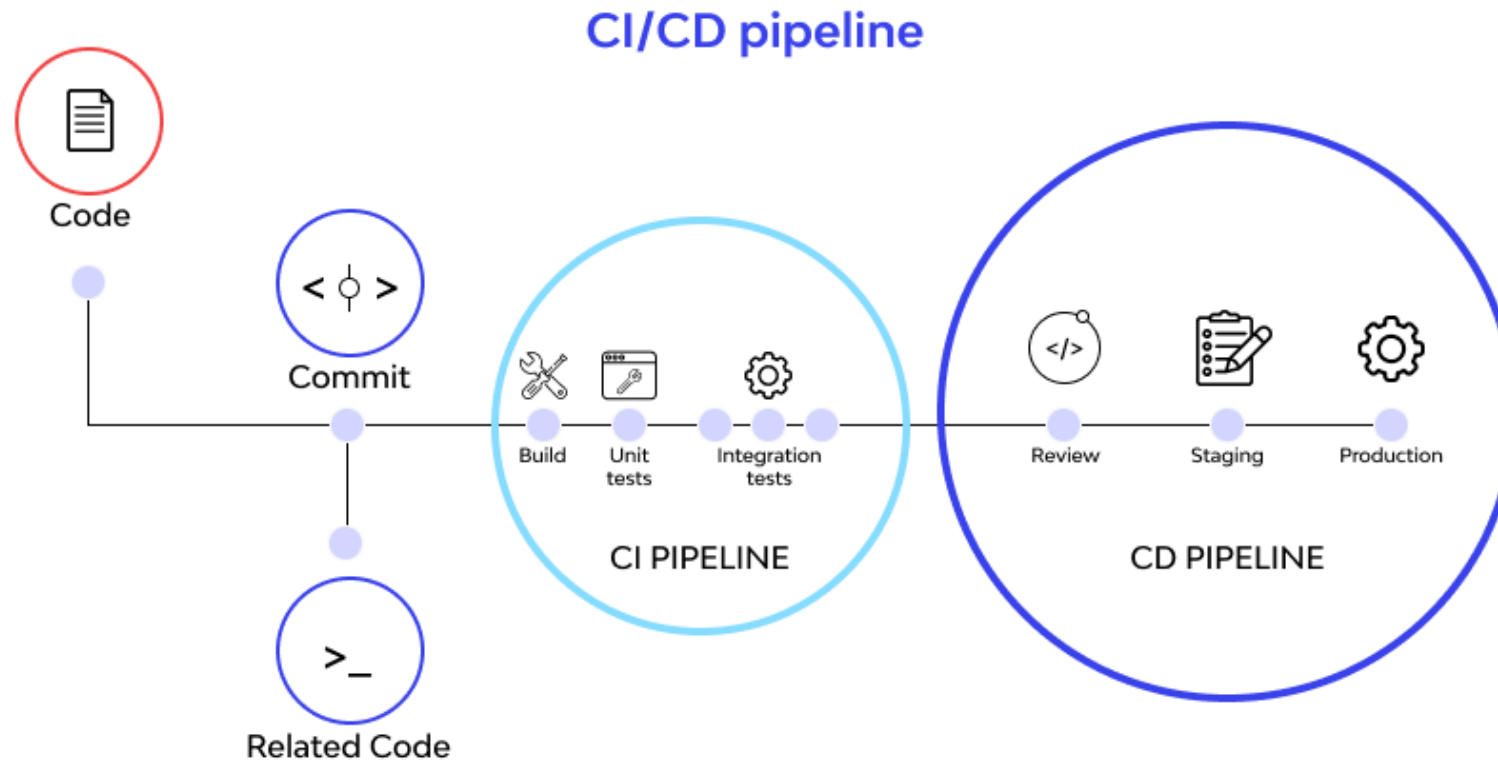
2- WHAT IS CI?

o Continuous integration (CI) is a software engineering practice in which frequent, isolated changes made by developers are immediately tested and reported on when they are added to a larger code base.

o CI aims to provide rapid feedback so that when a defect is introduced into the code base, it is identified and corrected as soon as possible.
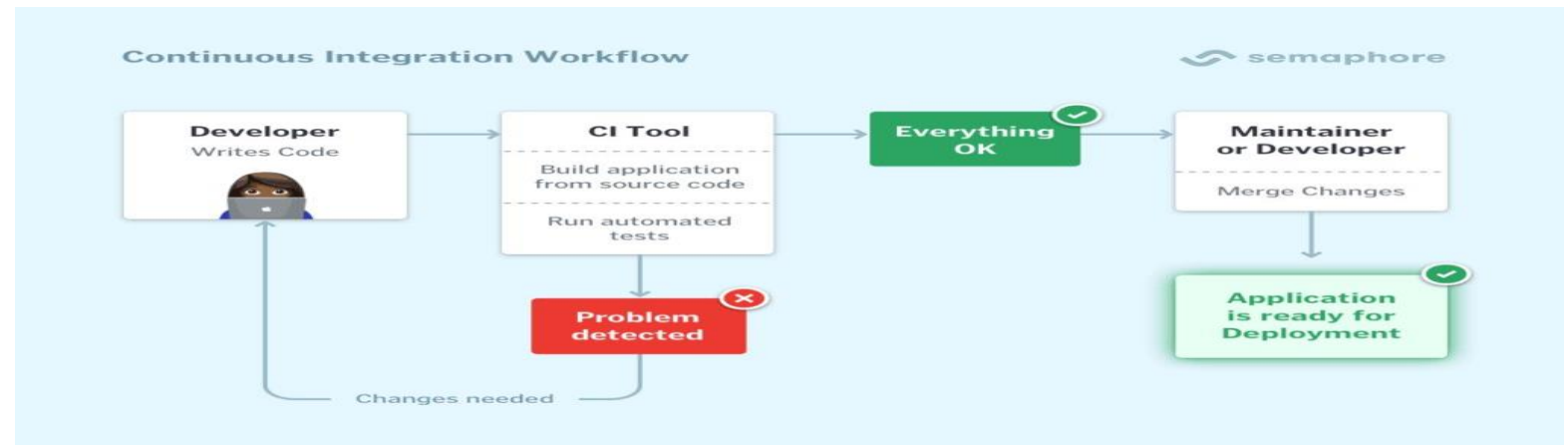
3- WHAT IS CD?

o Continuous delivery is a software development practice where code changes are automatically prepared for a release to production. *Continuous delivery automates the entire software release process. Every revision that is committed triggers an automated flow that builds, tests, and then stages the update. The final decision to deploy to a live production environment is triggered by the developer.*
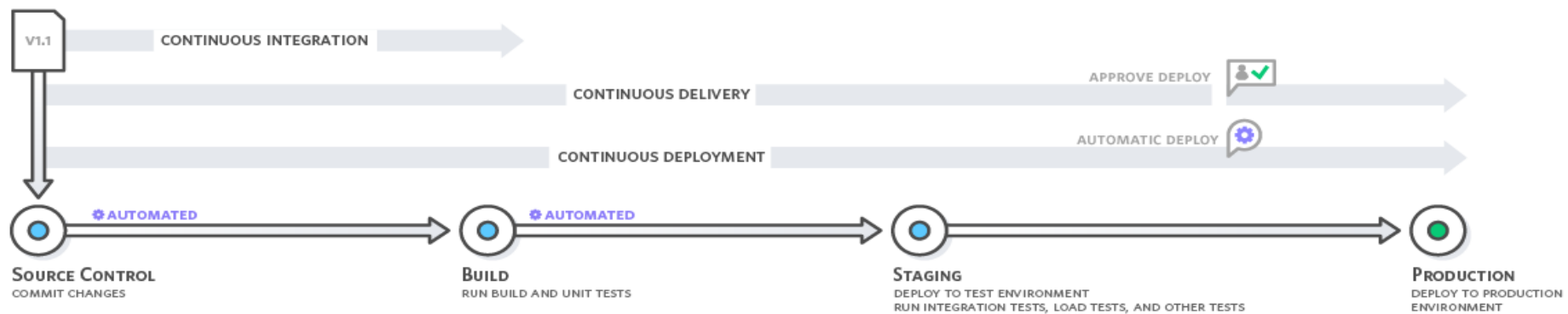
4- BENEFITS OF USING CI/CD:
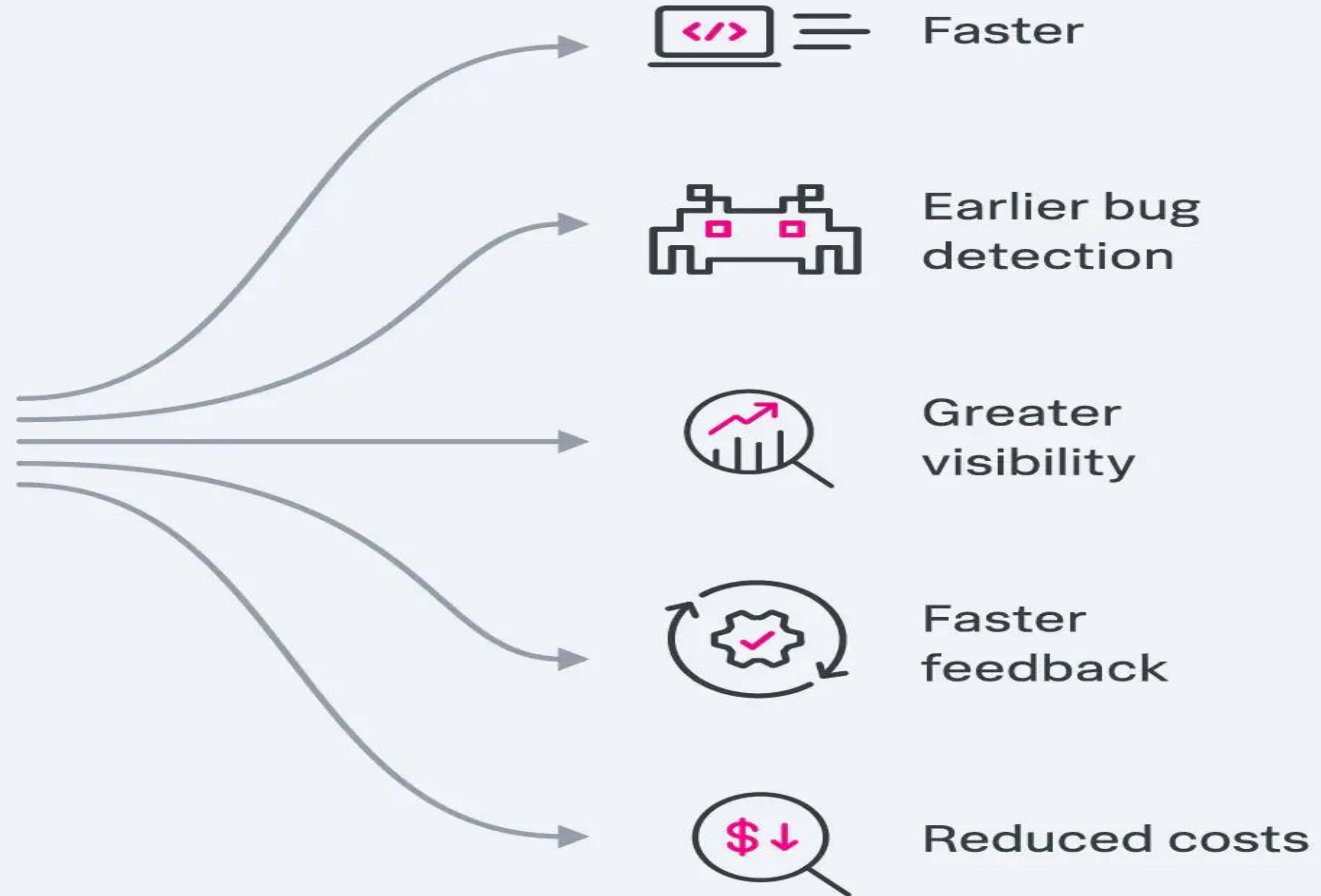
4- BENEFITS OF USING CI/CD:

o **Cost Deduction:**
   Due to less human error. Embracing CI/CD is the perfect fix to shorten the time to finish a project   and market new features. The shorter the development cycle, the higher the chances are to meet   ambitious time-to-market goals.

o **Superior Quality Code:**
   Developers release code into a shared repository in small batches, which enables them to conduct parallel testing and fastly detect errors.

o **Reduce complexity.**

o **Customer satisfaction:**
   The on-demand delivery experience that customers insist on leaves little room for errors and bugs. Implementing CI/CD reduces both lead time and response time, which in turn minimizes release risk and maximizes developer time.

CONT. BENEFITS OF USING CI/CD:

- **Easy Maintenance & Updates:**
  Downtime often results in irreparable damage to customer trust and the company's reputation. Catching bugs in the early stages of deployment helps you fix the bugs promptly without any delay in shipping the build. While testing takes place in the background, developers can save a lot of time, which enhances productivity.

THANK YOU!