BENEFITS OF CI/CD TO ACHIEVE, BUILD, AND DEPLOY AUTOMATION FOR CLOUD-BASED SOFTWARE PRODUCTS.

Continuous integration, continuous deployment (CI/CD) is the technical practice used in automating the process of build software products reliably. It is used to integrate, build, test and deploy code automatically from code to production.

What CI/CD can do:
1. Code Review;
2. Compile/Lint
3. Merge/Integrate
4. Run Unit Tests
5. Run Integration Tests
6. Verify Dependency Security
7. Deploy to Test Environment
8. Team Test
9. Deploy to Client Test Environment
10. Create Infrastructure
11. Deploy to Production
12. Smoke Test in Prod
13. Rollbacks
14. Promoting Production

S/N	Task	Value	Benefits of CI/CD
1	Catch Compile Errors After Merge	Reduce Cost	Less developer time on issues from new developer code.
2	Catch Unit Test Failures	Avoid Cost	Less bugs in production and less time in testing
3	Detect Security Vulnerabilities	Avoid Cost	Prevent embarrassing or costly security holes
4	Automate Infrastructure Creation	Avoid Cost	Less human error, Faster deployments
5	Automate Infrastructure Cleanup	Reduce Cost	Less infrastructure costs from unused resources
6	Faster and More Frequent Production Deployments	Increase Revenue	New value-generating features released more quickly
7	Deploy to Production Without Manual Checks	Increase Revenue	Increase revenue due to faster release time to market
8	Automated Smoke Tests	Protect Revenue	Protect revenue because it reduced downtime from a deploy-related crash or major bug
9	Automated Rollback Triggered by Job Failure	Protect Revenue	Quick undo to return production to working state

In conclusion, with all these benefits listed above, CI/CD will increase overall revenue of the company by reducing down-time of server and eliminate unnecessary expensive that can be caused by human imperfection in repetitive tasks in our company software production.